



BIFMA e3-2008 Furniture Sustainability Standard

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Table of Contents

| | | |
|---------|--|----|
| 1 | General | 1 |
| 1.1 | Purpose | 1 |
| 1.2 | Scope | 1 |
| 2 | Normative References | 2 |
| 3 | Definitions | 3 |
| 4 | Assessing Conformance, Evaluation, and Assessment Criteria | 7 |
| 4.1 | Elements | 7 |
| 4.2 | Prerequisites | 7 |
| 4.3 | Credits | 8 |
| 4.4 | Points | 8 |
| 4.4.1 | Levels of Conformance | 8 |
| 4.5 | Baseline and Normalization Values | 8 |
| 4.6 | Frequency of Evaluation | 8 |
| 5 | Materials | 9 |
| 5.1 | Prerequisite | 9 |
| 5.2 | Climate Neutral Materials | 9 |
| 5.3 | Life Cycle Assessment | 10 |
| 5.4 | Efficient Use of Materials | 10 |
| 5.5 | Rapidly Renewable Materials | 10 |
| 5.6 | Bio-based Renewable Materials - Sustainable Wood | 11 |
| 5.6.1 | Basic Level | 11 |
| 5.6.2 | Advanced Level | 11 |
| 5.7 | Recycled Content | 11 |
| 5.7.1 | Basic Level | 11 |
| 5.7.2 | Advanced Level | 12 |
| 5.7.3 | Packaging | 13 |
| 5.8 | Recyclable and Biodegradable Materials | 13 |
| 5.9 | Extended Product Responsibility | 13 |
| 5.9.1 | Design for Durability/Upgradeability | 13 |
| 5.9.2 | Design for Remanufacturing | 13 |
| 5.9.3 | Design for Recycling | 14 |
| 5.9.4 | Other Facilitation Efforts | 14 |
| 5.9.4.1 | Research on Recovery Options | 14 |
| 5.9.4.2 | Buy-back/Take-back/Leasing | 14 |
| 5.10 | Solid Waste Management | 14 |
| 5.11 | Water Management | 14 |
| 5.11.1 | Water Inventory of Factory | 15 |
| 5.11.2 | Water Efficiency | 15 |

| | | |
|---------|---|----|
| 5.11.3 | Wastewater Discharge | 15 |
| 6 | Energy and Atmosphere..... | 16 |
| 6.1 | Prerequisite | 16 |
| 6.2 | Building Energy Performance Baseline..... | 16 |
| 6.3 | Building Energy Performance Rating | 16 |
| 6.4 | LEED Certified Facility | 16 |
| 6.5 | Embodied Energy | 17 |
| 6.5.1 | Cradle-to-Gate Analysis | 17 |
| 6.5.2 | Gate-to-Gate Analysis | 17 |
| 6.5.3 | Embodied Energy - 10% Reduction | 17 |
| 6.6 | Finished Product Energy Consumption..... | 17 |
| 6.6.1 | Lighting Products | 17 |
| 6.7 | Transportation | 17 |
| 6.7.1 | Inbound Transportation | 17 |
| 6.7.2 | Outbound Transportation | 17 |
| 6.8 | On-site and Off-site Renewable Energy | 17 |
| 6.9 | Greenhouse Gases..... | 18 |
| 6.9.1 | Greenhouse Gases Inventory Baseline | 18 |
| 6.9.2 | Greenhouse Gas Reduction by 2% or 4%..... | 19 |
| 6.9.3 | Greenhouse Gas Reduction by 4% or 8%..... | 19 |
| 6.9.4 | Greenhouse Gas Reduction by 6% or 12%..... | 19 |
| 6.9.5 | Greenhouse Gas Voluntary Reporting Program | 19 |
| 7 | Human and Ecosystem Health | 20 |
| 7.1 | Prerequisites | 20 |
| 7.1.1 | Demonstration of Compliance | 20 |
| 7.1.2 | Key Chemical, Risk, and EMS Policies..... | 20 |
| 7.2 | ISO 14001 or Equivalent | 20 |
| 7.3 | Chemical Management Plan (CMP) – Facility | 20 |
| 7.4 | Effects of Product, Process and Maintenance Chemicals..... | 21 |
| 7.4.1 | Product Level (Material Specification)..... | 21 |
| 7.4.1.1 | Basic Level | 21 |
| 7.4.1.2 | Intermediate Level | 21 |
| 7.4.1.3 | Advanced Level | 21 |
| 7.4.2 | Process Level (Process Chemicals)..... | 22 |
| 7.4.3 | Maintenance/Operations Level | 22 |
| 7.4.4 | Chemical Reduction Strategy | 22 |
| 7.5 | Reduction/Elimination of Chemicals of Concern | 22 |
| 7.5.1 | Elimination from Products | 22 |
| 7.5.2 | Reduction or Elimination from Manufacturing Processes | 22 |
| 7.5.3 | Reductions from Maintenance/Operations level..... | 24 |

| | | |
|---|--|----|
| 7.5.4 | Reduction of Hazardous Wastes and Air Emissions..... | 24 |
| 7.5.4.1 | Hazardous Waste | 25 |
| 7.5.4.2 | Air Emissions | 25 |
| 7.6 | Low Emitting Furniture | 26 |
| 8 | Social Responsibility..... | 28 |
| 8.1 | Prerequisites | 28 |
| 8.1.1 | Employee Health and Safety Management | 28 |
| 8.1.2 | Labor and Human Rights | 28 |
| 8.2 | Policy on Social Responsibility | 28 |
| 8.3 | External Health and Safety Management Standard..... | 28 |
| 8.4 | Inclusiveness..... | 28 |
| 8.5 | Engage in Community Outreach and Involvement..... | 29 |
| 8.6 | Social Responsibility Reporting | 29 |
| 8.6.1 | Basic Level | 29 |
| 8.6.2 | Advanced Level | 29 |
| 8.7 | Supply chain..... | 29 |
| 8.7.1 | Basic Level | 29 |
| 8.7.2 | Advanced Level | 30 |
| Annex A - Map of EPA Regions | | 31 |
| Annex B - Chemicals of Concern List..... | | 32 |
| Annex C - Individual Volatile Organic Chemical (VOC) Concentration Limits | | 44 |
| Annex D - Scorecard (Normative)..... | | 48 |

Foreword¹

This Standard was developed by the Joint Committee on Business and Institutional Furniture Sustainability using the consensus process described by the American National Standards Institute.

The Committee was created by the Business and Institutional Furniture Manufacturers Association (BIFMA) and NSF International.

NSF and BIFMA developed this Standard in order to provide the marketplace with a meaningful standard that would harmonize sustainability standards for the office furniture industry and help to distinguish environmentally preferable business and institutional furniture. The Standard was designed to allow for multiple levels of achievement, to provide an open alternative to proprietary protocols.

Suggestions for improvement of this Standard are welcome. Comments should be sent to Chair, Joint Committee on Business and Institutional Furniture Sustainability, c/o NSF International, Standards Department, P. O. Box 130140, Ann Arbor, Michigan 48113-0140, USA.

Business and Institutional Furniture Manufacturers Association (BIFMA)

Established in 1973, the Business and Institutional Furniture Manufacturers Association (BIFMA) International's mission is to lead, advocate, inform, and develop standards for the North American office and institutional furniture industry. BIFMA serves businesses that are primarily engaged in design, development, marketing, and fulfillment of office and institutional furniture products.

BIFMA is a not-for-profit organization that provides an effective forum for Members to cooperate and collaborate on appropriate industry issues. We develop voluntary product and industry standards that support safe, healthy and sustainable environments; publish key industry statistics; advocate for legislation and government regulation that have a direct impact on the health of the industry; and facilitate meaningful dialog and education to support our core services and the industry we serve.

NSF International

NSF International, an independent, not-for-profit organization helps protect you by certifying products and writing standards for food, water, and consumer goods (www.nsf.org). Founded in 1944, NSF is committed to protecting public health and safety worldwide. NSF is a World Health Organization Collaborating Centre for Food and Water Safety and Indoor Environment; and an American National Standards Institute (ANSI) accredited standards developer. Additional services include safety audits for the food and water industries, management systems registrations delivered through NSF International Strategic Registrations, organic certification provided by Quality Assurance International and education through the NSF Center for Public Health Education.

¹ The information contained in this Foreword is not part of this American National Standard (ANS) and has not been processed in accordance with ANSI's requirements for an ANS. Therefore, this Foreword may contain material that has not been subjected to public review or a consensus process. In addition, it does not contain requirements necessary for conformance to the Standard.

BIFMA e3-2008 Furniture Sustainability Standard

1 General

1.1 Purpose

The purpose of this voluntary Standard is to provide measurable market-based definitions of progressively more sustainable furniture by establishing performance criteria that address environmental and social aspects throughout the supply chain.

1.2 Scope

This Standard provides a pathway towards sustainability by establishing measurable criteria for multiple levels of achievement and/or performance.

This Standard is applicable to all business and institutional furniture; this includes but is not limited to moveable walls, systems furniture, desking systems, casegoods, tables, seating, and accessories. The Standard is also applicable to materials and components manufactured by suppliers to furniture manufacturers.

This Standard is applicable to business and institutional furniture manufactured in one facility or multiple facilities, one country or multiple countries. It addresses product-based characteristics in the general areas of materials, use of energy, human and ecosystem health, and social responsibility impacts.

2 Normative References

The following documents contain provisions that, through reference in this text, constitute provisions of this standard. At the time of publication, the indicated editions were valid. All standards are subject to revision, and parties are encouraged to investigate the possibility of applying the recent editions of the standards indicated below.

- ANSI/BIFMA M7.1-2007, *Standard for Formaldehyde & TVOC Emissions From Office Furniture Systems, Components and Seating*, <http://www.bifma.org/standards/standards.html>
- ANSI/BIFMA X7.1-2007 *Standard for Formaldehyde and TVOC Emissions of Low emitting Office Furniture Systems and Seating* <http://www.bifma.org/standards/standards.html>
- California Code of Regulations, Title 24, Part 6 *California's Energy Efficiency Standards for Residential and Nonresidential Buildings*, <http://www.energy.ca.gov/title24/>
- California Indoor Air Quality Specifications for Open Panel Office Furniture, 2006 http://www.dhs.ca.gov/iaq/VOCS/CA_FurnitureBid-EnvIAQ.htm
- California Integrated and Waste Management Board, *Sustainable (Green) Building, Special Environmental Requirements Specification*, Section 01350 <http://www.ciwmb.ca.gov/greenbuilding/Specs/Section01350/>
- Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) *Appendices I or II*, www.cites.org
- ISO 11469, *Plastics -- Generic identification and marking of plastics products* www.iso.org
- ISO 14001, *Environmental management systems -- Requirements with guidance for use*, www.iso.org
- ISO 14025, *Environmental labels and declarations -- Type III environmental declarations -- Principles and procedures*, www.iso.org
- ISO 14040, *Environmental management -- Life cycle assessment -- Principles and framework*, www.iso.org
- ISO 14044, *Environmental management -- Life cycle assessment -- Requirements and guidelines*, www.iso.org
- United States Green Building Council LEED – *Existing Buildings: Operations & Maintenance Rating System*, www.usgbc.org

3 Definitions

3.1 air pollution: The presence of contaminants or pollutant substances in the air that interfere with human health or welfare, or produce other harmful environmental effects.

3.2 biodegradable: Capable of decomposing under natural conditions.

3.3 byproduct: Material, other than the principal product, generated as a consequence of an industrial process or as a breakdown product in a living system.

3.4 carcinogen: Any substance that can cause or aggravate cancer.

3.5 chemicals of concern: A chemical that makes a significant contribution to one or more of the following life cycle impact categories (Refer to Annex B):

- persistent, bioaccumulative, and toxic (PBT); and/or
- reproductive toxicant; and/or
- carcinogen; and/or
- endocrine disruptor.

3.6 child labor: Exploitation of workers under the minimum legal age for employment in the country where the facility operates.

3.7 conformity assessment: Demonstration that specified requirements relating to a product, process, system, person, or body is fulfilled.

3.7.1 first party conformity assessment: Conformity assessment activity that is performed by the person or organization that provides the object.

3.7.2 second party conformity assessment: Conformity assessment activity that is performed by a person or organization that has a user or purchaser interest in the object.

3.7.3 third party conformity assessment: Conformity assessment activity that is performed by a person or body that is independent of the person or organization that provides the object, and of the user or purchaser interests in that object.

3.8 cradle-to-gate: A term used to describe the LCA boundary encompassing the life cycle stages of raw material extraction and conversion to a bulk form or a generic shape.

3.9 criteria (air) pollutants: The 1970 amendments to the Clean Air Act required EPA to set National Ambient Air Quality Standards for pollutants known to be hazardous to human health. EPA has identified and set standards to protect human health and welfare for six pollutants: ozone, carbon monoxide, total suspended particulates, sulfur dioxide, lead, and nitrogen oxide. The term, "criteria pollutants" derives from the requirement that EPA must describe the characteristics and potential health and welfare effects of these pollutants. It is on the basis of these criteria that standards are set or revised.

3.10 design for the environment (DFE): The systematic integration of environmental attributes into the design of products and processes. There are three unique characteristics of DFE:

- The entire life-cycle is considered
- Point of application is clearly in the product realization
- Decisions are made using a set of values consistent with industrial ecology, integrative systems thinking or another framework.

3.11 ecosystem: The interacting system of a biological community and its non-living environmental surroundings.

3.12 environment: The sum of all external conditions affecting the life, development, and survival of an organism.

3.13 environmental aspect: An element of an organization's activities, products, or services that can interact with the environment.

3.14 environmental policy: A statement by the organization of its intentions and principles in relation to its overall environmental performance, which provides a framework for action and for the setting of its environmental objectives and targets.

3.15 environmental management system: The part of a company's overall management system that includes organizational structure, planning activities, responsibilities, practices, procedures, processes, and resources for developing, implementing, achieving, reviewing, and maintaining the environmental policy.

3.16 forced labor: Compulsory prison or debt bondage labor. Lodging of deposits or identity papers by employers or outside recruiters for the purpose of restricting or preventing the individual from leaving employment.

3.17 fossil fuel: Fuel derived from ancient organic remains. Some examples are peat, coal, crude oil, and natural gas.

3.18 gate-to-gate: A term used to describe the product boundary encompassing the fabrication and assembly of business and institutional furniture. For purposes of the assessment, the entry gate is the receiving dock of the first facility where basic materials used in the manufacture of the furniture (e.g. steel, particleboard, fabric, laminate, etc.) begins the conversion to furniture components. The end gate is the shipping dock where the ready-to-install furniture is transported for distribution to the end user. The gate-to-gate assessment will include transportation of intermediate materials and components between facilities where more than one physical location is included in the manufacturing process.

3.19 greenhouse gas (GHG): Gases related to human activities that accelerate the greenhouse effect (as defined in Credit 6.9.1).

3.20 hazardous substances (materials):

- Any substance that poses a threat to human health and/or the environment. Typical hazardous substances are toxic, corrosive, ignitable, explosive, or chemically reactive.
- Any substance designated by EPA to be reported if a designated quantity of the substance is spilled in the waters of the United States or is otherwise released into the environment.

3.21 legacy products: Business and institutional furniture products manufactured for sale prior to the publication date of this standard.

3.22 life cycle: The total impact of a system, function, product, or service from the extraction of raw materials through its end-of-life management.

3.23 life cycle assessment (LCA): A tool for the systematic evaluation of the environmental aspects of a product or service system through all stages of its life cycle consistent with ISO

14040. An analytical tool to implement life cycle thinking, inclusive of both product and process. An LCA is generally quantitative and requires that the results be normalized to a functional unit.

3.24 life cycle inventory (LCI): A process of quantifying energy and raw material requirements, atmospheric emissions, waterborne emissions, solid wastes, and other releases for the entire life cycle of a product, process, or activity.

3.25 life cycle thinking: A conceptual approach that addresses environmental problems from a whole-systems or holistic perspective. The essential difference from an LCA is that the results are not normalized to a functional unit, and the results may be expressed qualitatively or quantitatively.

3.26 maintenance chemical: A chemical not directly used in the manufacturing of the product (e.g. forklift engine oil).

3.27 package: A container providing a means of marketing, protection, or handling of a product and shall include a unit package, an intermediate package, and a shipping/transport container as defined in American Society for Testing and Materials (ASTM) D 996. "Package" shall also mean and include such unsealed receptacles as carrying cases, crates, cups, pails, rigid foil, and other trays, wrappers and wrapping films, bags, and tubs.

3.28 post-consumer: Generated by households, or by commercial, industrial, and institutional facilities in their role as end-users of the product, which can no longer be used for its intended purpose. This includes return of materials from the distribution chain.

3.29 post-industrial (pre-consumer): Diverted from the waste stream during the manufacturing process. Excluded is reutilization of materials such as rework, regrind, or scrap generated in a process and capable of being reclaimed within the same process that generated it.

3.30 pollution: This is generally, the presence of a substance in the environment that because of its chemical composition or quantity prevents the functioning of natural processes and produces undesirable environmental and health effects.

3.31 process chemical: Used in the direct manufacturing of the product and is not intended to be incorporated into the product as shipped (e.g. prep solvent prior to powdercoat).

3.32 product chemical: Incorporated in or on the product as shipped (e.g. wood finish).

3.33 recovered material: Waste materials and byproducts that have been recovered or diverted from solid waste, but does not include materials and byproducts generated from, and commonly reused within, an original manufacturing process.

3.34 recyclable: Capable of minimizing waste generation by recovering and reprocessing usable products that might otherwise become waste.

3.35 recycle: To minimize waste generation by recovering and reprocessing usable products that might otherwise become waste (e.g. aluminum cans, paper and bottles, etc.).

3.36 recycled-content materials: Materials that have been recovered or otherwise diverted from the solid waste stream, either during the manufacturing process (post-industrial) or after consumer use (post-consumer).

3.37 remanufacturing: Restoring products to usable condition by replacing or repairing parts as needed.

3.38 renewable energy: Energy from a source that is replenishable and replenished on some reasonable time scale. Potential renewable energy sources include, but are not limited to wind, solar, heat from the earth's interior, oceans, rivers, and biomass.

3.39 renewable material: A material that is replenishable and replenished on some reasonable time scale. Renewable material sources include, but are not limited to wood, grass fibers, plant-based plastics, and bio-based fuels.

3.40 reusable packaging: Packaging that has been conceived and designed to accomplish within its lifecycle a minimum number of trips or rotations, is refilled or used for the same purpose for which it was conceived, with or without the support of auxiliary products present on the market enabling the packaging to be refilled: such reused packaging will become packaging waste when no longer subject to reuse.

3.41 social responsibility (or equity): The identification of issues, the development of standards, and the implementation of programs that address corporate responsibility for the ethical treatment of employees, communities, and other stakeholders.

3.42 solid waste: Non-liquid, non-soluble materials ranging from municipal garbage to industrial wastes that may contain complex and sometimes hazardous substances.

NOTE: For purposes of this standard, this definition is not intended to match the EPA Resource Conservation and Recovery Act (RCRA) definition.

3.43 source reduction: A pollution prevention technique that eliminates the potential for pollution at the source, or where the polluting material enters the product or service cycle.

3.44 stakeholders: People who are (or might be) affected by any action taken by an organization. Examples include customers, owners, employees, associates, partners, contractors, suppliers, and related people or located nearby.

3.45 sustainable development: Development that meets the needs of the present without compromising the ability of future generations to meet their needs.

3.46 toxic: Presenting an unreasonable risk of injury to human health or the environment.

3.47 waste: Unwanted materials left over from a manufacturing process, or refuse from places of human or animal habitation.

4 Assessing Conformance, Evaluation, and Assessment Criteria

Organizations that choose to assess their business and/or institutional furniture products to this standard can achieve first party, second party, or third party conformity assessment. Organizations can show continuous improvement by moving products to higher levels of conformance.

The manufacturer of the applicant product can determine the scope of conformance to the extent that the scope can be clearly communicated to potential purchasers of the product. The scope of conformance can be defined based on geographic location. A product that is manufactured in one location can be included, while the same product manufactured in another location could be excluded. In this case, the credits that are based on “facility” or “corporate” characteristics (such as energy use, water use, and health and safety management) shall be evaluated based on the activities only at the location included in the scope of conformance (see 3.18 definition of Gate-to-Gate).

The scope of assessment is Gate-to-Gate unless otherwise specified within individual credit language. The applicant shall clearly specify cut-off criteria for inclusion of inputs and outputs and the assumption on which the cut-off criteria are established in the scope of assessment. The intent of the Standard is to encourage reduction in environmental impact and credits are not awarded for operations that are within the Gate-to-Gate boundaries or within the individual credit language boundaries, but are excluded from the applicants’ scope of assessment. The standard does not provide credit for outsourcing of pollution. The scope of conformance can also be defined based on product options or characteristics. For example, wood/veneer options could be included while laminate/non-wood options are excluded, or vice versa.

Representative (worst-case) Sample Selection

For manufacturers wishing to demonstrate compliance for a specific product(s), only that product shall be evaluated.

A manufacturer may demonstrate compliance of a broad set of products by using the results from a limited number of representative models. A range, series, or category of products with varying characteristics may be grouped together for evaluation purposes if the products can be expected to perform similarly during evaluation (e.g. having the same general construction, materials, and manufacturing processes). Evaluation models shall be selected from the group based on those that can be expected to have the highest propensity for environmental impact. A case-by-case product line analysis by the manufacturer in consultation with the laboratory and/or certification agency is required, taking into consideration any special attributes, materials, methods of manufacture/construction, etc.

4.1 Elements

This Standard is divided into four basic elements consisting of various prerequisites and credits that are potentially available to organizations seeking product conformance to the standard. The four basic elements are:

- materials;
- energy and atmosphere;
- human and ecosystem health; and
- social responsibility.

4.2 Prerequisites

Each element has one or more prerequisites that are required as the minimum performance against the standard and applicants/products shall meet all prerequisites in each element in order to proceed. Once the prerequisite(s) are met, products may achieve additional credits toward multiple levels of achievement in each element by meeting the specified performance requirements.

4.3 Credits

Beyond the prerequisites, there is no minimum number of credits from any of the four major elements required to demonstrate conformance to this Standard. The required credits can come from any of the four elements.

4.4 Points

Each credit has one or more points that accumulate toward a level of conformance. In addition to a minimum number to total points required for each conformance level, there is also a minimum number of product related points for each level. See Annex D for a listing of product related credits and points.

4.4.1 Levels of Conformance

- 1 (Silver) 32 to 44 total points; at least 5 of which are product related points
- 2 (Gold) 45 to 62 total points; at least 11 of which are product related points
- 3 (Platinum) 63 to 90 total points; at least 18 of which are product related points

4.5 Baseline and Normalization Values

Some points require improvements against a baseline. Applicants have flexibility in defining the unit of measure they use to demonstrate improvement. Once an applicant defines the unit of measure, they must consistently use that throughout the standard whenever the normalization method is applied. For purposes of this standard, the baseline is the average of any 36 consecutive months within the previous 72-month period.

4.6 Frequency of Evaluation

Products must be reevaluated if significant changes to materials, processes or the facility occur that affect the eligibility for any credit within the scope of conformance at the time of the change. Regardless, the frequency of conformance evaluation shall not exceed three years.

5 Materials

5.1 Prerequisite

The organization shall implement a design for environment (DFE) program. The prerequisite is met if a DFE program is implemented at the time of the assessment. The DFE program shall, at a minimum, consist of the following elements: renewable materials; recycled materials; recyclable and biodegradable materials; end of life management; water management and energy efficiency.

5.2 Climate Neutral Materials

The organization shall increase the use of climate neutral materials. The applicant shall receive one point if it demonstrates that at least 30% of the final product weight is comprised of climate neutral materials. Materials are climate neutral when there is zero net greenhouse gases (GHG) measured in terms of CO₂ equivalent, emitted over the life cycle of the material. GHG impact is calculated utilizing life cycle assessment (LCA) and then is neutralized utilizing certified emission reductions (CERs), verified emissions reductions (VERs), or reductions registered with the California Climate Action Registry (CCAR). The offsets must equal or exceed the GHG produced during extraction, processing, manufacture, and transport of the product.

For the purposes of this credit, the LCA scope must include the following boundary elements (reference: ISO 14040):

- acquisition of raw material
- inputs and outputs in the main manufacturing/process sequence
- distribution/transportation

For the purposes of this credit, the LCA scope need *not* include:

- use and maintenance of finished product
- disposal of process wastes and products
- recovery of used products
- additional operations, such as lighting and heating

For the purposes of this credit, the offset quality must meet at least one of the following:

| Offset Quality Mechanism | Web Address/Notes |
|--------------------------|---|
| Gold Standard CER | http://www.cdmgoldstandard.org/ |
| CER | http://cdm.unfccc.int/index.html |
| Gold Standard VER | Voluntary Carbon Standard (VCS), with added sustainable development criteria |
| VER | http://www.v-c-s.org |
| CCAR | http://www.theclimateregistry.org/ |

Note- The Climate Registry is a nonprofit partnership developing an accurate, complete, consistent and transparent greenhouse gas emissions measurement protocol that is capable of supporting voluntary and mandatory greenhouse gas emission reporting policies for its Members and Reporters.

It will provide a verified set of greenhouse gas emissions data from its Reporters supported by a robust accounting and verification infrastructure.

5.3 Life Cycle Assessment

The organization shall encourage use of Life Cycle Assessments (LCA) to inform product design and development, and to optimize materials choices. The organization may complete an LCA for the furniture product being assessed. By fulfilling one of the three criteria below, the applicant can earn a maximum of three points in this credit, as detailed below.

5.3.1 The applicant shall receive one point if it provides evidence that the company has incorporated the life cycle assessment frame work into product design by applying the first two of the four LCA components in ISO 14040 and ISO 14044 (Goal & Scope Definition and Life Cycle Inventory). The LCA boundary must encompass extraction of raw materials through end of product life.

5.3.2 The applicant shall receive two points if it provides evidence that the company has completed an LCA utilizing all four components in ISO 14040 and ISO 14044. At a minimum, the impact categories must include Global Warming Potential.

5.3.3 The applicant shall receive three points if it demonstrates compliance to 5.3.2 and provides evidence that the company has completed an independent third-party review of its LCA.

5.4 Efficient Use of Materials

The organization shall reduce the quantity (mass) of raw materials used in the manufacture of products. Material efficiency is calculated for the materials comprising 80 percent of the weight of the products to be assessed. This credit is focused on the substantial conversion of raw material (e.g. sawing, routing, machining, forming, stamping, molding, cutting, and sewing) and does not cover the extraction and initial processing of raw materials.

By fulfilling one of the two criteria below, the applicant can earn a maximum of two points in this credit, as detailed below.

5.4.1 The applicant shall receive one point if it demonstrates a Material Efficiency of 60%.

5.4.2 The applicant shall receive two points if it demonstrates a Material Efficiency of 70%.

$$\text{Material Efficiency} = [(\text{Input Mass} - \text{Waste Mass}) / (\text{Input Mass})] \times 100\%$$

Process aids and incidental consumables (e.g. gloves, sand paper) are not included in the calculation. Waste Mass includes materials sent to recycling.

5.5 Rapidly Renewable Materials

The organization shall increase the use of rapidly renewable materials that are obtained from bio-based sources and decrease dependency on petroleum-based materials. Rapidly renewable materials reach commercial maturity in 10 years or less. In order to qualify for these points the product to be assessed must contain at least 1 percent rapidly renewable material by weight or volume. By fulfilling one or both of the two criteria below, the applicant can earn a maximum of two points in this element, as detailed below:

5.5.1 The applicant shall receive one point if it selects rapidly renewable materials for use as an element of a new or existing product.

5.5.2 The applicant shall receive two points if it demonstrates compliance to 5.5.1 and ensures that rapidly renewable material production waste is not destined for disposal.

5.6 Bio-based Renewable Materials - Sustainable Wood

In order to qualify for these points the product to be assessed must contain at least 5 percent wood by weight. The organization shall encourage environmentally responsible forest management and will not specify species listed in CITES Appendices I or II. By fulfilling one of the two criteria below, the applicant can earn a maximum of two points in this credit, as detailed in 5.6.1 and 5.6.2. The objective evidence is the documentation provided by the supplier.

5.6.1 Basic Level

The applicant shall receive one point if either:

- A minimum of 50 percent of the total wood weight of the product conforms to Sustainable Forestry Initiative (SFI), Canadian Standards Association (CSA), or another qualified organization’s sustainable forest practices; or
- A minimum of 20 percent of the total wood weight of the product conforms to Forest Stewardship Council (FSC) responsible forest practices.

5.6.2 Advanced Level

The applicant shall receive two points if either:

- A minimum of 75 percent of the total wood weight of the product conforms to SFI’s, CSA’s, or another qualified organization’s sustainable forest practices; or
- A minimum of 30 percent of the total wood weight of the product is compliant to FSC responsible forest practices.

5.7 Recycled Content

The organization shall increase the amount of recycled content material incorporated into products and packaging. By fulfilling the criteria below, the applicant can earn a maximum of three points in this credit, as detailed below.

5.7.1 Basic Level

The applicant shall receive one point if either:

- It incorporates recycled content materials into the product so that the sum of post-consumer recycled content plus one-half of the post-industrial content constitutes at least 30 percent of the total weight of the materials in the product; or
- It incorporates recovered materials into the product at or above the levels specified in the recovered materials content requirements listed below in Table One.

Note: An applicant product may not meet the Table One-Recycled Materials Content Requirements solely based on its steel content, or if it is made from more than 50% (by weight) extruded aluminum.

TABLE ONE- Recovered Materials Content Requirements

| Product | Material | Post-consumer Content (%) | Total Recycled Content |
|--|------------------------|-----------------------------|------------------------|
| Furniture structure | Steel | 16 | 25 |
| Furniture structure | Aluminum ¹ | -- | 75 |
| Cellulose Loose-Fill and Spray-On | Post-consumer Paper | 75 | 75 |
| Particleboard/ Fiberboard component ² | Wood or wood composite | | 80 |
| | Agricultural fiber | -- | 90 |
| Fabric | PET | See Note ³ Below | 100 |
| Plastic furniture component | Various (non-fabric) | | 20 |
| Remanufactured or Refurbished Furniture | Various | 25 | 25 |
| Acoustical Material | Various | | 20 |

¹ This limit does not apply to extruded aluminum.

² Particleboard and fiberboard used in the wood components of office furniture may also contain other recovered cellulosic materials, including, but not limited to, paper, wheat straw, and bagasse. The percentages of these materials contained in the product would also count toward the recovered materials content level of the item.

³ The 100% post-consumer content requirement of the CPG for PET fabric is not replicated here.

Note: Post consumer and total recycled percentages are expressed as weight percent of total material specified.

5.7.2 Advanced Level

The applicant shall receive two points if it demonstrates compliance to either requirement in 5.7.1 and either:

- It incorporates recycled content materials into the product so that the sum of post-consumer recycled content plus one-half of the post-industrial content constitutes at least 50 percent of the total weight of the materials in the product; or
- It demonstrates that the recovered content of its product exceeds the levels specified in the recovered materials content requirements listed in Table One by at least 20 percent in each material category, relevant to the product being assessed; if 100 percent recovered content has not already been achieved.

Note: this second option shall not be available for products made entirely of steel or made from more than 50% (by weight) extruded aluminum.

5.7.3 Packaging

The applicant shall receive one point if it incorporates recovered materials into packaging at or above the levels specified in the recovered materials content requirements as listed in Table Two:

TABLE TWO- Recovered Materials Content Requirements

| Product | Material | Post-consumer Content (%) | Total Recycled Content (%) |
|-----------|----------------------|---------------------------|----------------------------|
| Packaging | LDPE, LLDPE | 25 | 35 |
| | HDPE | 25 | 35 |
| | PET | 10 | 25 |
| | Corrugated Cardboard | 25 | 40 |

5.8 Recyclable and Biodegradable Materials

The organization shall increase the use of recyclable and biodegradable materials in the product.

The applicant shall receive one point if it:

- Identifies and quantifies the amount by weight of recyclable and biodegradable materials in the product. All qualifying recyclable and biodegradable materials shall be clearly labeled or otherwise identified in a manner that facilitates easy identification of materials during disassembly; and
- Verifies availability of recycling/biodegradation facilities (excluding waste to energy) for recyclable and biodegradable materials in product in at least six of the ten U. S. EPA regions (see annex A for map of regions).

Note: labeling/markings of plastic components, to support identification and recycling, shall be completed in accordance with ISO 11469.

5.9 Extended Product Responsibility

5.9.1 Design for Durability/Upgradeability

The applicant shall earn one point if it maximizes the useful life of the product to make it easy to refurbish and upgrade for multiple uses by the original or subsequent users. In order to accomplish this, the organization shall adopt and publicize a policy stating that it will design and manufacture products that have a long useful life; can withstand repeated service, repair, and handling; and has standardized product parts and components available to facilitate maintenance, servicing, and reassembly. The organization's policy may allow for the replacement of design components and reuse of functional components. The product to be assessed must be covered by the policy.

5.9.2 Design for Remanufacturing

The applicant shall earn one point if it designs products to ensure that they can be remanufactured. The products shall be designed in a modular fashion to facilitate the

replacement of components that are subject to wear or breakage, likely to go out of style, or likely to be upgraded. In order to earn a point in this credit, the organization shall conform to all three of the requirements below in its design for remanufacturing:

- Product disassembly instructions are publicly available;
- Disassembly is possible with standard tools and does not require special training; and
- Disassembly can occur in a reasonable amount of time.

5.9.3 Design for Recycling

The organization shall maximize the degree to which materials from the product that cannot be reused or remanufactured can be recycled into value-added products. In order to earn a point in this credit, the organization shall conform to all four of the requirements below in its design for recycling:

- Product disassembly instructions are publicly available;
- Disassembly is possible with standard tools and does not require special training;
- Disassembly of the product can occur in a reasonable amount of time; and
- Product parts are labeled, or otherwise identified, to facilitate separation by material content, and identification of any materials that may require special handling.

5.9.4 Other Facilitation Efforts

By fulfilling one or both of the two criteria below, the applicant can earn a maximum of three points in this credit, as detailed below:

5.9.4.1 Research on Recovery Options

The applicant shall receive one point if it researches and publishes information on the highest value recovery opportunities for its legacy product lines and the materials that comprise them.

5.9.4.2 Buy-back/Take-back/Leasing

The applicant shall receive one point if it makes a buy-back or take-back program part of its strategic sales strategy for products it is selling or leasing. The applicant shall receive a second point upon providing proof of implementation. The applicant may involve a third party in the buy-back/take-back program. The applicant shall ensure that the program is managed consistently with its own environmental programs.

5.10 Solid Waste Management

The applicant shall receive a maximum of two points based on its published and implemented solid waste diversion program for landfill disposal (this credit does not apply to hazardous waste). The applicant shall receive:

- One point for a 100 percent diversion goal.
- One point for achieving 100% diversion for product to be assessed for solid waste generated from fabrication and assembly of product components. Not included are solid wastes generated from raw material extraction and conversion; process aids (for example sandpaper, gloves, spray booth filters) and packaging.

5.11 Water Management

The intent of this section is to focus on process water only. Process water includes water used for pre-treatment (e.g. phosphating wash line), water-based adhesive processes, cooling water, water-jet cutting operations, and spraybooth over-spray capture systems. In order to qualify for water management credits, the applicant must prove that process water was used in the manufacturing of the product to be assessed, at any point in time during the past six years. The applicant must state whether the assessment is being completed for the applicants' own facilities, and/or facilities operated by a supplier (using process water for the product to be assessed).

5.11.1 Water Inventory of Factory

The applicant shall receive one point if it establishes a baseline process water inventory to document water sources/withdrawals, uses, and discharges for the facility where the finished product is assembled or manufactured.

5.11.2 Water Efficiency

The applicant shall receive one point if it implements program(s) to maximize process water efficiency to reduce the burden on the water supply and local wastewater treatment systems for the facility where the finished product is assembled or manufactured. The organization shall provide objective evidence that water efficiency improvement goals have been established for the facility within the past 6 years. Performance against the goals must be tracked. Absolute reductions in total water usage must be documented.

5.11.3 Wastewater Discharge

The applicant shall receive two points if it achieves zero net process water usage or wastewater discharge rates for the facility where the finished product is assembled or manufactured.

6 Energy and Atmosphere

6.1 Prerequisite

Top management of the organization shall develop and implement an energy policy that shall establish the organization's overall direction in terms of its commitment to energy conservation and performance. The policy shall:

- Be appropriate to the nature and scale of the organization's activities, products, and services;
- Include a commitment to continual improvement;
- Include a commitment to comply with relevant local, state, and federal regulations, and with other requirements to which the organization subscribes;
- Provide the framework for setting and reviewing objectives and targets; and
- Be documented, implemented, and communicated.

The policy should focus on the organization's mission, vision, and core values. Specific local or regional conditions should be considered, as should the organization's image and the views of other interested parties. Other interested parties may include suppliers, employees, shareholders, customers, consumers, local communities, environmental groups, lenders, and regulators.

6.2 Building Energy Performance Baseline

6.2.1 The applicant shall receive one point if it conducts a building energy baseline from historical energy use data, for buildings directly associated with manufacturing and/or final assembly of the product being assessed. This would include all energy sources used such as electricity, natural gas, propane, etc.

6.2.2 The applicant shall receive up to two additional points if it conforms to 6.2.1 and conducts a building energy baseline from historical energy use data for facilities such as warehouses, office building, showrooms, supply partner facilities (other than final assembly), that are associated with the product being assessed.

Note: one point for each facility, maximum of two points.

6.3 Building Energy Performance Rating

6.3.1 The applicant shall receive two points if it demonstrates an EnergyStar equivalent rating of at least 60, for buildings directly associated with manufacturing and/or final assembly of the product being assessed; calculated using the method described in the LEED-EB Reference Guide, Credit EA 1.

6.3.2 The applicant shall receive up to two additional points if it conforms to 6.3.1 and demonstrates an EnergyStar rating of at least 60 for facilities such as warehouses, office buildings, showrooms, supply partner facilities (other than final assembly) etc., that are associated with the product being assessed. This is calculated using the method described in the LEED-EB Reference Guide, Credit EA 1, or improves the energy efficiency by 35% over the baseline calculated in credit 6.3.1.

Note: one point for each facility, maximum of two points.

6.4 LEED Certified Facility

6.4.1 The applicant shall receive one point for each facility that has achieved USGBC Leadership in Energy and Environmental Design (LEED) certification.

Note: one point for each facility, maximum of two points.

6.5 Embodied Energy

6.5.1 Cradle-to-Gate Analysis

The applicant shall receive one point for assessing the amount of embodied energy consumed for the materials used within the product. The assessment is to be completed using publicly available Life-Cycle Inventory (LCI) data that exist for each material.

6.5.2 Gate-to-Gate Analysis

The applicant shall receive one point for conducting a Life-Cycle Inventory (LCI) of the amount of energy associated with the processes used during manufacturing of the product.

6.5.3 Embodied Energy - 10% Reduction

The applicant shall receive one point for a 10% reduction from 6.5.1 or 6.5.2 of energy associated with raw material production (Cradle-to-Gate) or energy reduction with the processes used during manufacturing of the product (Gate-to-Gate).

6.6 Finished Product Energy Consumption

Note: This credit applies only if the product line being assessed includes lighting products.

6.6.1 Lighting Products

The applicant shall receive one point if its lighting products meet Title 24 of the 2007 California Energy Code as described in Part 6, Energy Efficiency Standards for Residential and Nonresidential Buildings; and section 5.13 of the 2005 Nonresidential Compliance Manual.

6.7 Transportation

6.7.1 Inbound Transportation

The organization shall earn one point if it develops, documents, and implements technologies and strategies that help carriers save fuel, reduce air pollution, and reduce emissions when receiving materials and components to the manufacturing facility and distributing between facilities(s).

6.7.2 Outbound Transportation

The organization shall earn one point if it develops, documents, and implements technologies and strategies that help carriers save fuel, reduce air pollution, and reduce emissions when distributing finished goods.

6.8 On-site and Off-site Renewable Energy

The applicant may receive up to a maximum of four points for using increasing levels of on-site and off-site renewable energy or renewable energy certificates to help reduce greenhouse gases and other environmental impacts associated with fossil fuel energy use. This may be accomplished by a combination of individual actions by the organization or its suppliers for the

sum of the points allocated to those individual actions. Example: One point would be awarded for implementing 1% of on-site renewable energy. An additional point would be awarded for meeting the 10% of the total energy requirements with renewable power or certificates over the conformance period.

6.8.1 The applicant shall receive one point if it uses on-site renewable energy for 1% of its energy requirement for buildings directly associated with manufacturing and/or final assembly of the product being assessed.

OR

If it uses off-site renewable energy/certificates for 5% of its energy requirement for buildings directly associated with the manufacturing and/or final assembly of the product being assessed.

Off-site renewable energy sources are as defined by the Center for Resource Solutions (Green-e certified power marketer, a Green-e accredited utility program, Green-e certified tradable Renewable Certificates) or the equivalent.

6.8.2 The applicant shall receive an additional point if it uses on-site renewable energy for 2% of its energy requirement for buildings directly associated with manufacturing and/or final assembly of the product being assessed.

OR

If it uses off-site renewable energy/certificates for 10% of its energy requirement for buildings directly associated with manufacturing and/or final assembly of the product being assessed.

6.8.3 The applicant shall receive an additional point if it uses on-site renewable energy for 3% of its energy requirement for buildings directly associated with manufacturing and/or final assembly of the product being assessed.

OR

If it uses off-site renewable energy/certificates for 15% of its energy requirement for buildings directly associated with manufacturing and/or final assembly of the product being assessed.

6.8.4 The applicant shall receive an additional point if it uses on-site renewable energy for 4% of its energy requirement for buildings directly associated with manufacturing and/or final assembly of the product being assessed.

OR

If it uses off-site renewable energy/certificates for 20% of its total energy requirement for buildings directly associated with manufacturing and/or final assembly of the product being assessed.

6.9 Greenhouse Gases

By fulfilling the following criteria, the applicant can earn up to six points in the Greenhouse Gases (GHG) section.

6.9.1 Greenhouse Gases Inventory Baseline

The applicant shall receive one point if it establishes a baseline for GHG emissions from such activities as energy use, industry processes, including all emissions sources of the six major

GHGs below. Calculation of the baseline shall be based on the boundaries established by the applicant within the facility where manufacturing and/or final assembly of the product being assessed occurs.

- Carbon Dioxide (CO₂)
- Methane (CH₄)
- Nitrous Oxide (N₂O)
- Hydrofluorocarbons (HFCs)
- Perfluorocarbons (PFCs)
- Sulfur Hexafluoride (SF₆)

6.9.2 Greenhouse Gas Reduction by 2% or 4%

The applicant shall receive an additional point if it conforms to 6.9.1 and reduces greenhouse emission inventory by 2% on an absolute basis, or 4% on a normalized basis, from the baseline for all emissions sources of the six previously listed GHGs.

6.9.3 Greenhouse Gas Reduction by 4% or 8%

The applicant shall receive an additional point if it conforms to 6.9.1 and reduces greenhouse emission inventory by 4% on an absolute basis, or 8% on a normalized basis, from the baseline for all emissions sources of the six previously listed GHGs.

6.9.4 Greenhouse Gas Reduction by 6% or 12%

The applicant shall receive an additional point if it conforms to 6.9.1 and reduces greenhouse emission inventory by 6% on an absolute basis, or 12% on a normalized basis, from the baseline for all emissions sources of the six previously listed GHGs.

6.9.5 Greenhouse Gas Voluntary Reporting Program

The applicant shall receive two points if it participates in a voluntary GHG Reporting program, where companies annually inventory and report their GHG emissions; and voluntary commitment to reducing their GHG emissions. EPA Climate Leaders Program, Chicago Climate Exchange, or similar programs are acceptable.

7 Human and Ecosystem Health

7.1 Prerequisites

7.1.1 Demonstration of Compliance

The organization shall screen all facilities for compliance with environmental and health and safety requirements of their products and processes. The organization shall evaluate compliance with all applicable environmental and health and safety regulations that govern toxic and hazardous substance use and risk management associated with human and ecosystem health. The organization or any representative of the organization shall not have any human or ecosystem health related criminal violations within the previous three years. Any human or ecosystem health related criminal violation at an acquired company that preceded the date of acquisition shall not preclude an organization from participating in this standard.

7.1.2 Key Chemical, Risk, and EMS Policies

The organization shall adopt a policy statement. The policy statement shall be publicly available and communicated to all persons working for or on behalf of the organization. In addition to the previously mentioned topics, the organization shall document the following:

- An environmental policy that includes commitments to prevention of pollution, continuous improvement, and compliance with applicable regulations and other obligations;
- A chemical management policy that includes a statement of how the company assesses and reduces human and ecosystem health impacts; and
- Incorporation of life-cycle thinking into company policies.

7.2 ISO 14001 or Equivalent

The applicant shall receive two points if it documents conformance with

- ISO 14001 *Environmental Management Systems – Specification with guidance for use*,

OR

- an environmental management system that contains the following elements for all facilities associated with the product being assessed.
 1. Environmental policy
 2. Environmental aspects
 3. Legal or other requirements
 4. Objectives and targets
 5. Implementation
 6. Management review

7.3 Chemical Management Plan (CMP) – Facility

The organization shall establish a CMP to manage chemicals in products and processes. By fulfilling one of the following three criteria, the applicant can earn one point as detailed below.

- The applicant shall receive one point if it develops and implements a system for inventory tracking and control of process, product, and facility management chemicals that includes acquisition, use, storage, transportation, and final disposition; or
- The applicant shall receive one point if it adopts as part of best management practices (BMPs) chemical hazard recognition using appropriate parts of the Process Safety Management Standard (OSHA Std. 29 CFR 1910.119) and/or EPA Risk Management Plan (RMP) (40 CFR Part 68); or
- The applicant shall receive one point if its CMP contains a documented action plan for emergency planning and response that includes the basic reporting requirements of SARA Title III (U.S. Code Title 42- The Public Health and Welfare, Chapter 116 – Emergency Planning and Community Right to Know).

7.4 Effects of Product, Manufacturing Process, and Maintenance Chemicals

The organization shall design safer products and processes by using design for the environment (DFE) protocol to identify and assess the human health and ecosystem health impacts of chemicals of concern by using reference lists in normative Annex B. Evaluation may take place at the:

- Product level; and/or
- Manufacturing process level; and/or
- Maintenance/operations level.

The intent of the identification and assessment process is for the product manufacturer to collect data from the supply chain. The chemical constituents are to be reported and referenced by Chemical Abstracts Service Registry Number (CASRN). Chemical constituents of metal alloys can be based on generic composition defined by appropriate standards organizations. No further review of wood and other natural fibers is required; however, products using these materials shall report added chemical constituents as defined below.

7.4.1 Product Level (Material Specification)

The organization shall identify all chemical constituents of the materials incorporated in to the product within its gate to gate boundary in its ready to install state, and shall assess them for human and ecosystem impact. By fulfilling one or more of the following criteria, the applicant can earn a maximum of four points as detailed below.

7.4.1.1 Basic Level

The applicant may earn one point if it identifies and assesses all MSDS reportable chemicals as defined by OSHA 29 CFR 1910.1200 for materials that add up to 95% by weight of the final product.

Or

7.4.1.2 Intermediate Level

The applicant may earn three points if it identifies and assesses all chemicals of concern within its gate-to-gate boundary down to 100 ppm, using the list from normative Annex B, for materials that add up to 99% by weight of the final product.

Or

7.4.1.3 Advanced Level

The applicant may earn points if it identifies and assesses all chemical constituents within its gate to gate boundary down to 100 ppm for materials that add up to (maximum total of 4 points for 7.4.1):

- 75% by weight of final product (two points); or
- 90% by weight of product (three points); or
- 99.9% by weight of product; (four points).

7.4.2 Manufacturing Process Level (Process Chemicals)

The applicant shall receive one point if it identifies and assesses all process chemical constituents down to 1000 ppm of at least three manufacturing processes associated with the manufacture of the product, within the gate-to-gate assessment (either by the organization itself or its supply chain), and assesses them for human and ecosystem impact, and exposure during application consistent with applicable hazard assessment requirements. Manufacturing processes do not cover the extraction and initial processing of raw materials. If there are only one or two manufacturing processes then all process chemical constituents must be identified and assessed.

7.4.3 Maintenance/Operations Level

The applicant shall receive one point if it identifies and assesses all chemical constituents down to 1000 ppm of 50% (by purchase amount) of all maintenance and operating chemicals not directly used in the manufacture of the product, and assesses them for human and ecosystem impact. This credit applies at the facility where manufacturing or final assembly occurs.

7.4.4 Chemical Reduction Strategy

The applicant shall receive one point if it develops a strategy to improve public and environmental health by reducing the use of materials and processes with significant life cycle impacts. The strategy shall be based on the findings of 7.4.1, 7.4.2, and 7.4.3. Significance shall be based on quantity of chemical used, relative impact, applicable impact categories, likelihood of impact, and feasibility.

7.5 Reduction/Elimination of Chemicals of Concern

The organization shall minimize the impact on human and ecosystem health of chemicals used in or associated with production of furniture.

7.5.1 Elimination from Products

The organization shall document that the product does not contain chemicals of concern, as listed in Annex B in the following classifications down to 100 ppm. The applicant shall receive two points for each classification that is shown not to be present above 100 ppm (maximum eight points available):

- persistent, bioaccumulative, and toxic (PBT)
- reproductive toxicant
- carcinogen
- endocrine disruptor

7.5.2 Reduction or Elimination from Manufacturing Processes

Following from credit 7.4.2, the applicant can earn points by reducing and/or eliminating chemicals of concern that exist below 1000 ppm are recognized as being:

1. persistent, bioaccumulative, and toxic (PBT); and/or
2. reproductive toxicant; and/or
3. a carcinogen; and/or
4. an endocrine disruptor (ED); and/or

(For 1-4 see Annex B)

5. Potential Acidification;
6. Potential Aquatic Toxicity;
7. Potential Eutrophication;
8. Potential Global Warming;
9. Potential Photochemical Smog Formation;
10. Potential Stratospheric Ozone Depletion; or
11. Potential Terrestrial Toxicity.

Note – An informative reference for Acidification, Aquatic Toxicity, Eutrophication, Global Warming, Photochemical Smog Formation, Stratospheric Ozone Depletion, or Terrestrial Toxicity impact chemicals is available in the guidance document.

The applicant can earn points by fulfilling the criteria below but shall not receive more than four total points for 7.5.2 regardless of how many criteria it fulfills beyond this limit.

7.5.2.1 On initial certification, the applicant shall receive:

- One point for demonstrating a 5 – 9% reduction on an absolute basis, or a 10-19% reduction, on a normalized basis, in chemical(s) in one or more of the above categories;

Or

- Two points for demonstrating a 10 – 15% reduction on an absolute basis, or 20-29% reduction, on a normalized basis, in chemical(s) in one or more of the above categories;

Or

- Three points for demonstrating a 16 – 19% reduction on an absolute basis, or 30-39% reduction, on a normalized basis, in chemical(s) in one or more of the above categories;

Or

- Four points for demonstrating a reduction of 20% or more, on an absolute basis, or 40% or more, on a normalized basis, in chemical(s) in one or more of the above categories; or the elimination of chemicals in one or more of the above categories.

On re-certification, the applicant shall earn points in this category by demonstrating further reductions in increments of 5% (on an absolute basis), or 10% on a normalized basis, by showing the levels of reduction detailed above in a different set of chemicals without an increase in the former set of chemicals.

7.5.2.2 An applicant can earn points if it documents that the manufacturing processes used to manufacture the product do not contain any chemical of concern (see Annex B) at a concentration greater than 1,000 ppm in one or more of the listed classifications. The applicant shall receive one point for each of the classifications in 7.5.2 (1-4) that is shown to be absent above this concentration.

A chemical is relevant to 7.5.2 if it is present and/or released at any stage of the manufacturing processing of the final product. Presence or release during processing may be intentional or unintentional; direct or indirect (e.g., intentionally added chemicals or background levels). For the purposes of 7.5.2, a chemical of concern shall be considered successfully phased out if the presence or release of the chemical in the process is below 1000 ppm. Where reduction is achieved by substitution, there shall be no net increase of chemicals from any of the above categories.

7.5.3 Reductions from Maintenance/Operations level

Following from credit 7.4.3, the applicant can earn a point by reducing and/or eliminating chemicals of concern listed in normative Annex B that are recognized as being:

1. persistent, bioaccumulative, and toxic (PBT); and/or
 2. reproductive toxicant; and/or
 3. a carcinogen; and/or
 4. an endocrine disruptor (ED); and/or
- (For 1-4 see Annex B)
5. Potential Acidification;
 6. Potential Aquatic Toxicity;
 7. Potential Eutrophication;
 8. Potential Global Warming;
 9. Potential Photochemical Smog Formation;
 10. Potential Stratospheric Ozone Depletion; or
 11. Potential Terrestrial Toxicity.

Note – An informative reference for Acidification, Aquatic Toxicity, Eutrophication, Global Warming, Photochemical Smog Formation, Stratospheric Ozone Depletion, or Terrestrial Toxicity impact chemicals is available in the guidance document.

On initial certification, the applicant shall receive:

- One point for demonstrating a 20% reduction or more, on an absolute basis, or 40% or more on a normalized basis, in chemical(s) in one or more of the above categories; or eliminating chemical(s) in one or more of the above categories.

On re-certification, the applicant shall earn a point earned in this category by demonstrating further reductions in increments of 10%, on an absolute basis, or 20% on a normalized basis, by showing the levels of reduction detailed above in a different set of chemicals without an increase in the former set.

This credit applies at the facility where manufacturing or final assembly occurs.

7.5.4 Reduction of Hazardous Wastes and Air Emissions

The scope of these credits shall include:

- Finishing (e.g. plating, coating, gluing, associated cleaning/degreasing and assembly) of the product and components.

And

- Fabrication (e.g. welding, casting, forming, molding, associated cleaning/degreasing) of small components that combined comprise up to a total of 5% of the product by weight

may be excluded. Processes such as the extraction and initial processing (including rolling, smelting...) of raw materials is excluded from the scope of this credit.

Finishing and fabrication operations for small components (e.g. fasteners, screws, washers, glides, labels), that combined comprise up to a total of 5% of the product by weight may be excluded. Processes such as the extraction and initial processing (including rolling, smelting) of raw materials is excluded from the scope of this credit. The applicant must include finishing and fabricating wherever it occurs. The applicant must state whether the assessment is being completed for the applicants own facilities and/or for facilities operated by a supplier (doing finishing or fabrication operations for the product to be assessed).

7.5.4.1 Hazardous Waste

The applicant shall receive one point for finishing and assembly if it:

- reduces the amount of hazardous waste generated by at least 10% on an absolute basis over the baseline period.

OR

- reduces the amount of hazardous waste generated by at least 20% on a normalized basis over the baseline period.

OR

- meets the criteria of a conditionally exempt small quantity generator.

The applicant shall receive one additional point for fabrication if it:

- reduces the amount of hazardous waste generated by at least 10% on an absolute basis over the baseline period.

OR

- reduces the amount of hazardous waste generated by at least 20% on a normalized basis over the baseline period.

OR

- meets the criteria of a conditionally exempt small quantity generator.

7.5.4.2 Air Emissions

The applicant shall receive one point for finishing and assembly if it:

- reduces the amount of air emissions generated by at least 10% on an absolute basis over the baseline period.

OR

- reduces the amount of air emissions generated by at least 20% on a normalized basis over the baseline period.

OR

- emits less than 1000 pounds of total HAPS.

The applicant shall receive one additional point for fabrication if it:

- reduces the amount of air emissions generated by at least 10% on an absolute basis over the baseline period.

OR

- reduces the amount of air emissions generated by at least 20% on a normalized basis over the baseline period.

OR

- emits less than one ton of HAPS.

7.6 Low Emitting Furniture

The organization shall ensure good indoor air quality by reducing irritating, odorous, and/or harmful indoor air contaminants in finished products. By fulfilling one or both of the criteria in 7.6.1 and 7.6.2, an applicant may earn either one or two points, as detailed below.

Individual furniture components of workstations (e.g. file cabinets, desks, drawer pedestals, work surfaces, tables, vertical panels, privacy screens, etc.) may obtain either or both points of this credit by meeting the maximum allowed emission factors for either an open plan workstation or a private office, using configurations as defined in ANSI/BIFMA M7.1-2007. This criterion also applies to items not necessarily intended to be in workstations like easels, conference tables, etc.

All surfaces are allowed a maximum emission factor depending upon the intended use environment. The maximum emission factor is calculated based on the guideline concentration for a chemical substance as defined in 7.6.1 or 7.6.2, the total surface area for the open plan workstation or private office, and the airflow rates for the open plan workstation or private office.

The standard test method to be used to demonstrate compliance is the ANSI/BIFMA M7.1-2007 Standard Test Method for Determining VOC emissions from Office Furniture Systems, Components, and Seating.

7.6.1 The applicant shall receive one point if furniture emissions concentrations or factors meet the following criteria as defined in ANSI/BIFMA X7.1-2007 at 168 hours:

Workstation systems (open plan or private) office emissions concentration limits

| | |
|---------------------|------------------------------|
| TVOCToluene | $\leq 0.5 \text{ mg/m}^3$ |
| Formaldehyde | $\leq 50 \text{ ppb}$ |
| Total Aldehydes | $\leq 100 \text{ ppb}$ |
| 4-Phenylcyclohexene | $\leq 0.0065 \text{ mg/m}^3$ |

Seating office emissions concentration limits

| | |
|---------------------|-------------------------------|
| TVOCToluene | $\leq 0.25 \text{ mg/m}^3$ |
| Formaldehyde | $\leq 25 \text{ ppb}$ |
| Total Aldehydes | $\leq 50 \text{ ppb}$ |
| 4-Phenylcyclohexene | $\leq 0.00325 \text{ mg/m}^3$ |

Individual furniture components maximum emission factors

| | ANSI/BIFMA M7.1-2007 Open Plan Workstation | ANSI/BIFMA M7.1-2007 Private Office Workstation |
|---|---|--|
| Formaldehyde, (ug/m ² hr) | 42.3 | 85.1 |
| TVOC, (ug/m ² hr) | 345 | 694 |
| Total Aldehyde, (umol/m ² hr) | 2.8 | 5.7 |
| 4-Phenylcyclohexene, (ug/m ² hr) | 4.5 | 9.0 |

7.6.2 The applicant shall receive one point if furniture emissions do not exceed the individual Volatile Organic Chemical (VOC) concentration limits listed in Annex C at 336 hours (14 days) or sooner when determined in accordance with the ANSI/BIFMA M7.1-2007 standard test method. These criteria are based on California EPA's OEHHA's reference exposure VOC limits in the CA Section 01350 specification, California Department of Public Health, *Standard Practice for the Testing of Volatile Organic Emissions from Various Sources using Small-Scale Environmental Chambers*, and on the 2006 California office furniture bid specification.

Note – When the emission factor at 336 hours is determined using the power-law defined in ANSI/BIFMA M7.1-2007 Section 10.4 and 10.5, the emission factors shall be reported as constant if the coefficient b is between -0.20 and 0.20.

Seating may obtain this credit by meeting ½ the maximum acceptable limits for a workstation as defined in 7.6.2.

Small chamber testing of component pieces of workstations per the ANSI/BIFMA M7.1-2007 standard is acceptable for this point, if there is third-party oversight in selecting representative components and in applying the calculations in ANSI/BIFMA M7.1-2007 Section 10.6.1 and 10.6.2 to estimate the emission factor of a product.

8 Social Responsibility

8.1 Prerequisites

8.1.1 Employee Health and Safety Management

The organization shall ensure employee health and safety by establishing management processes that will detect, avoid, or respond to actual and potential threats to the health and safety of personnel.

The processes shall include the following components:

- Identification of the local and national health and safety laws applicable to the facility
- Appointment of a management representative with defined responsibilities
- An employee health and safety policy
- Documented procedures for the management of the system including a corrective action process that addresses regulatory compliance and actual and potential threats to employee health and safety
- Establishment and maintenance of employee health and safety metrics
- Health and safety training available for employees
- Regular evaluation of compliance to applicable health and safety laws, as well as internal procedures and requirements

8.1.2 Labor and Human Rights

The organization shall protect and respect the rights of human resources at the local, national, and global levels by ensuring that forced or involuntary labor is not used or supported in any form, that employment is voluntary, and that child labor is not used or supported in any form.

8.2 Policy on Social Responsibility

One point is available if the organization adopts a publicly available documented policy (or policies) on social responsibility that, at minimum, addresses:

- Fair hiring practices
- Education for applicable employees in this subject area
- Corporate ethics
- Receipt of gifts
- Insider trading

8.3 External Health and Safety Management Standard

One point is available if the organization enhances productivity and employee welfare by implementing policies and procedures that go beyond the requirements of 8.1.1 by conforming to the requirements of a publicly available external health and safety management system standard.

8.4 Inclusiveness

One point is available if the organization promotes inclusiveness in the workforce, in management, and corporate governance bodies while recognizing the unique local norms that exist in different countries around the world. The organization shall develop and implement an inclusiveness policy that includes the following components:

- Identification of and compliance to the local and national inclusiveness rules and regulations applicable to the facility
- Documented procedures for the management of the system
- Establishment of appropriate feedback mechanisms
- A corrective action process
- Establishment and maintenance of employee inclusiveness metrics and internal performance tracking and reporting
- Inclusiveness education available for employees
- Regular evaluation of compliance to applicable inclusiveness rules and regulations, as well as internal procedures and requirements.

8.5 Engage in Community Outreach and Involvement

One point is available if the organization demonstrates good corporate citizenship to benefit the communities in which it operates. It shall demonstrate at least two volunteer efforts and/or financial contributions supporting community projects within each 12-month period.

8.6 Social Responsibility Reporting

The organization shall promote transparency through public reporting of social responsibility activities and results. Wherever possible, it shall use widely accepted metrics to evaluate the effects of these policies and activities on the company's stakeholders. By fulfilling one or both of the following requirements, the applicant can earn up to three points, as detailed below.

8.6.1 Basic Level

The applicant may earn one point if it publishes a public social responsibility report that, at minimum, addresses:

- Employee Health and Safety Management
- Labor and Human Rights Management
- Inclusiveness
- Community Outreach and Involvement

8.6.2 Advanced Level

The applicant may earn an additional two points if it publishes a comprehensive, public social responsibility report that follows reporting practices in the Global Reporting Initiative G3 Social Responsibility section, the SA8000 Social Accountability standard or other internationally recognized guidelines.

Either of these requirements is met if the social responsibility report is a part of a more comprehensive report that includes environmental or economic elements.

8.7 Supply chain

Using internationally recognized social responsibility criteria, the organization shall encourage continuous improvement in the supply chain relative to sustainable business criteria, and particularly to social responsibility. By fulfilling the following criteria, the applicant may earn up to three points, as detailed below.

8.7.1 Basic Level

The applicant may earn one point if it establishes a documented supplier assessment tool (which may be a self-assessment tool) containing social responsibility criteria for its suppliers. At a minimum, the assessment tool shall contain criteria in the following categories:

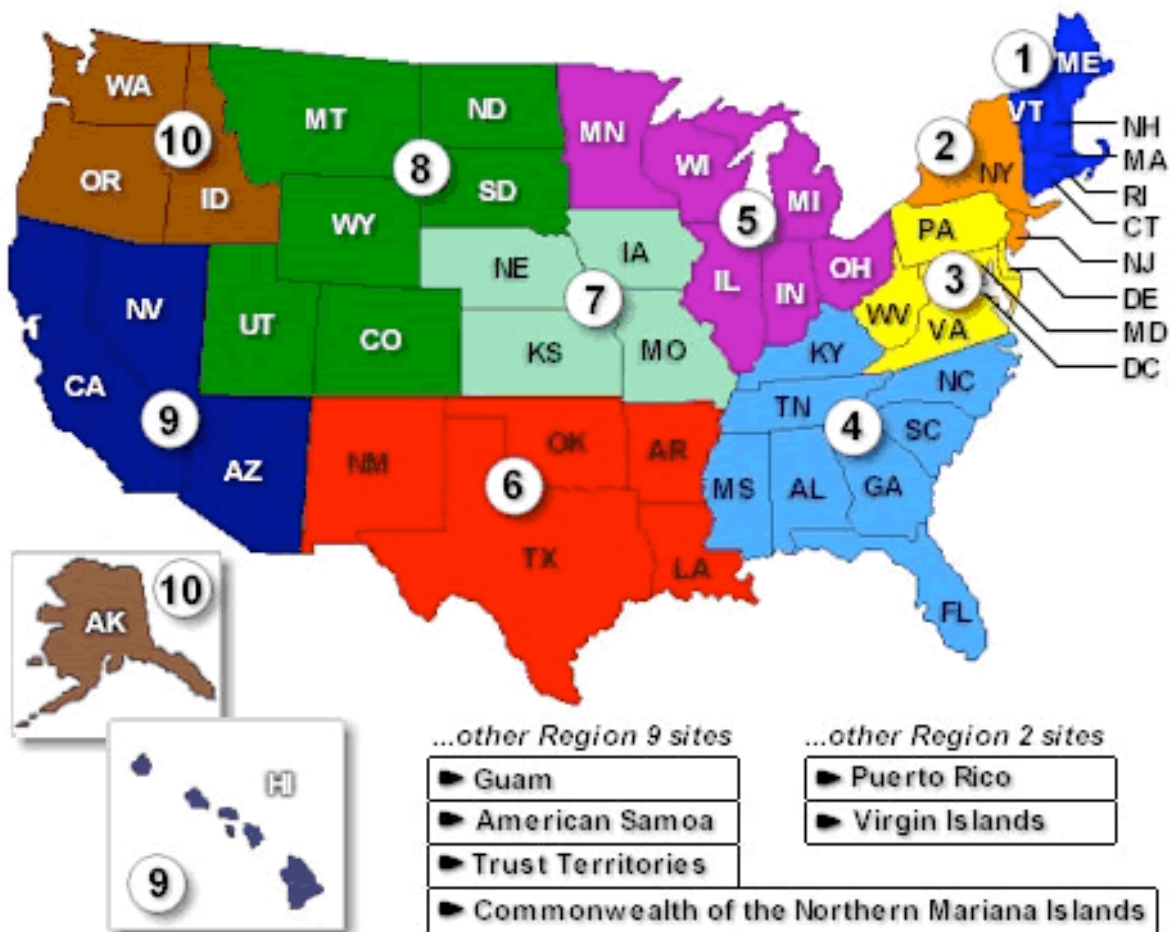
- Child labor
- Forced labor
- Health and safety
- Discrimination
- Discipline/harassment
- Working hours
- Compensation

8.7.2 Advanced Level

The applicant shall receive two additional points if it conforms to 8.7.1 and provides completed responses to the assessment tool from suppliers comprising at least 75% of its total direct material spend for all products, measured using actual annual spend data for a consecutive 12-month time period within the previous 2 years.

For suppliers that are part of the “75% of total direct material spend” that act as brokers, distributors, inventory management providers, etc. and do *not* manufacture and/or assemble the components/products purchased by the organization, the assessment tool responses must be obtained from their suppliers who do manufacture and/or assemble the components/products, again at the 75% of direct material spend level.

Annex A - Map of EPA Regions
(Informative)



Annex B - Chemicals of Concern List
(Normative)

| CASRN | Chemical Name | Endocrine Disruptor | PBT | Carcin | Reproductive Tox |
|------------|---|---------------------|-----|--------|------------------|
| | 5-Chloro-o-toluidine and its strong acid salts | NO | NO | YES | NO |
| | A mixture of: 4-[[bis-(4-fluorophenyl)-methylsilyl]methyl]-4H-1,2,4-triazole; 1-[[bis-(4-fluorophenyl)methyl-silyl]-methyl]-1H-1,2,4-triazole | NO | NO | NO | YES |
| | Arsenic (inorganic oxides) | NO | NO | NO | YES |
| | Benzidine-based dyes | NO | NO | YES | NO |
| | Ceramic fibers (airborne particles of respirable size) | NO | NO | YES | NO |
| | Chlorophenoxy herbicides | NO | NO | YES | NO |
| | Chromium (hexavalent compounds) | NO | NO | YES | NO |
| | Diaminotoluene (mixed) | NO | NO | YES | NO |
| | Glasswool fibers (airborne particles of respirable size) | NO | NO | YES | NO |
| | Hexachlorocyclohexane Isomers | NO | NO | YES | NO |
| | Lead compounds | NO | YES | YES | YES |
| | Mercury compounds | NO | YES | NO | YES |
| | Methoxyethylacrylate tinbutyltin, copolymer | YES | NO | NO | NO |
| | Methylmercury compounds | NO | NO | YES | NO |
| | Nickel compounds | NO | NO | YES | NO |
| | Polychlorinated dibenzofurans | NO | YES | YES | NO |
| | Polychlorinated dibenzo-p-dioxins | NO | YES | YES | NO |
| | Polychlorophenols and their sodium salts (mixed exposures) | NO | NO | YES | NO |
| | Polycyclic Aromatic Hydrocarbons (PAHs) | NO | YES | YES | NO |
| | Soots | NO | NO | YES | NO |
| | Soots, tars, and mineral oils (untreated and mildly treated oils and used engine oils) | NO | NO | YES | NO |
| | Tributyltin carboxylate | YES | NO | NO | NO |
| | Tributyltin compounds | YES | NO | NO | NO |
| | Tributyltin polyethoxylate | YES | NO | NO | NO |
| | Welding fumes | NO | NO | YES | NO |
| | Wood Dust | NO | No | Yes | NO |
| 100-00-5 | 1-Chloro-4-nitrobenzene | NO | NO | YES | NO |
| 100-25-4 | p-Dinitrobenzene | NO | NO | NO | YES |
| 10026-24-1 | Cobalt sulfate heptahydrate | NO | NO | YES | NO |
| 10034-93-2 | Hydrazine sulfate | NO | NO | YES | NO |
| 100-40-3 | 4-Vinylcyclohexene | NO | NO | YES | NO |
| 100-41-4 | Ethylbenzene | NO | NO | YES | NO |
| 100-42-5 | Styrene | YES | NO | YES | NO |
| 100-44-7 | Benzyl chloride | NO | NO | YES | NO |
| 10108-64-2 | Cadmium chloride | NO | NO | NO | YES |
| 101-14-4 | 4,4'-Methylene bis(2-chloroaniline) | NO | NO | YES | NO |
| 10124-43-3 | Cobalt sulfate | NO | NO | YES | NO |
| 101-61-1 | 4,4'-Methylene bis(N,N-dimethyl)benzenamine | NO | NO | YES | NO |
| 101-77-9 | 4,4'-Methylenedianiline | NO | NO | YES | NO |

| CASRN | Chemical Name | Endocrine Disruptor | PBT | Carcin | Reproductive Tox |
|-------------|---|---------------------|-----|--------|------------------|
| 101-80-4 | 4,4'-Diaminodiphenyl ether (4,4'-Oxydianiline) | NO | NO | YES | NO |
| 101-90-6 | Diglycidyl resorcinol ether (DGRE) | NO | NO | YES | NO |
| 1024-57-3 | Heptachlor epoxide | NO | NO | YES | NO |
| 103-33-3 | Azobenzene | NO | NO | YES | NO |
| 105735-71-5 | 3,7-Dinitrofluoranthene | NO | NO | YES | NO |
| 10595-95-6 | N-Nitrosomethylethylamine | NO | NO | YES | NO |
| 106325-08-0 | (2RS,3RS)-3-(2-Chlorophenyl)-2-(4-fluorophenyl)-[(1H-1,2,4-triazol-1-yl)-methyl]oxirane | NO | NO | NO | YES |
| 106340-44-7 | Tetrabromodibenzofuran (TeBDF) | YES | NO | NO | NO |
| 106-46-7 | p-Dichlorobenzene | NO | NO | YES | NO |
| 106-47-8 | p-Chloroaniline | NO | NO | YES | NO |
| 106-87-6 | 4-Vinyl-1-cyclohexene diepoxide (Vinyl cyclohexenedioxide) | NO | NO | YES | NO |
| 106-88-7 | 1,2-Epoxybutane | NO | NO | YES | NO |
| 106-89-8 | Epichlorohydrin | NO | NO | YES | YES |
| 106-93-4 | Ethylene dibromide | NO | NO | YES | YES |
| 106-94-5 | 1-Bromopropane | NO | NO | NO | YES |
| 106-99-0 | 1,3-Butadiene | NO | NO | YES | YES |
| 107-06-2 | Ethylene dichloride (1,2-Dichloroethane) | NO | NO | YES | NO |
| 107-13-1 | Acrylonitrile | NO | NO | YES | NO |
| 107-30-2 | Chloromethyl methyl ether (technical grade) | NO | NO | YES | NO |
| 108-05-4 | Vinyl acetate | NO | NO | YES | NO |
| 108171-26-2 | Chlorinated paraffins (Average chain length, C12;approximately 60 percent chlorine by weight) | NO | NO | YES | NO |
| 108-46-3 | Resorcinol | YES | NO | NO | NO |
| 108-60-1 | Bis(2-chloro-1-methylethyl)ether, technical grade | NO | NO | YES | NO |
| 108-88-3 | Toluene | NO | NO | NO | YES |
| 109-86-4 | 2-methoxyethanol | NO | NO | NO | YES |
| 110-00-9 | Furan | NO | NO | YES | NO |
| 110-49-6 | 2-methoxyethylacetate acetate | NO | NO | NO | YES |
| 110-80-5 | 2-ethoxyethanol | NO | NO | NO | YES |
| 110-86-1 | Pyridine | NO | NO | YES | NO |
| 11096-82-5 | PCB (Aroclor) 1260 | YES | NO | NO | NO |
| 11097-69-1 | PCB (Aroclor) 1254 | YES | NO | NO | NO |
| 111-15-9 | 2-ethoxyethylacetate acetate | NO | NO | NO | YES |
| 111-44-4 | Bis(2-chloroethyl)ether | NO | NO | YES | NO |
| 1116-54-7 | N-Nitrosodiethanolamine | NO | NO | YES | NO |
| 111-96-6 | Bis(2-methoxyethyl)ether | NO | NO | NO | YES |
| 1120-71-4 | 1,3-Propane sultone | NO | NO | YES | NO |
| 1134-23-2 | Cycloate | NO | NO | NO | YES |
| 114-26-1 | Propoxur | NO | NO | YES | NO |
| 115-28-6 | Chlorendic acid | NO | NO | YES | NO |
| 115-29-7 | Endosulfan (Benzoepin) | YES | NO | NO | NO |
| 115-32-2 | Dicofol (Kelthane) | YES | NO | NO | NO |
| 115-96-8 | Tris(2-chloroethyl) phosphate | NO | NO | YES | NO |
| 116-14-3 | Tetrafluoroethylene | NO | NO | YES | NO |
| 117-79-3 | 2-Aminoanthraquinone | NO | NO | YES | NO |

| CASRN | Chemical Name | Endocrine Disruptor | PBT | Carcin | Reproductive Tox |
|-------------|---|---------------------|-----|--------|------------------|
| 117-81-7 | Bis(2-ethylhexyl)phthalate | YES | NO | YES | YES |
| 117-82-8 | bis(2-Methoxyethyl)phthalate | NO | NO | NO | YES |
| 118-74-1 | Hexachlorobenzene | YES | YES | YES | YES |
| 119-34-6 | 4-Amino-2-nitrophenol | NO | NO | YES | NO |
| 119738-06-6 | (+/-) tetrahydrofurfuryl (R)-2-[4-(6-chloroquinoxalin-2-yloxy)phenoxy]-propionate | NO | NO | NO | YES |
| 119-90-4 | 3,3'-Dimethoxybenzidine (o-Dianisidine) | NO | NO | YES | NO |
| 119-93-7 | 3,3'-Dimethylbenzidine (ortho-Tolidine) | NO | NO | YES | NO |
| 12035-72-2 | Nickel subsulfide | NO | NO | YES | NO |
| 12054-48-7 | Nickel hydroxide | NO | NO | YES | NO |
| 120-71-8 | p-Cresidine | NO | NO | YES | NO |
| 120-80-9 | Catechol | NO | NO | YES | NO |
| 120-83-2 | 2,4 Dichlorophenol | YES | NO | NO | NO |
| 121-14-2 | 2,4-Dinitrotoluene | NO | NO | YES | YES |
| 12122-67-7 | Zineb | YES | NO | NO | NO |
| 12125-56-3 | Nickel hydroxide | NO | NO | YES | NO |
| 12174-11-7 | Palygorskite fibers (> 5mm in length) | NO | NO | YES | NO |
| 121-75-5 | Malathion | YES | NO | NO | NO |
| 122-34-9 | Simazine | YES | NO | NO | NO |
| 122-60-1 | Phenyl glycidyl ether | NO | NO | YES | NO |
| 122-66-7 | Hydrazobenzene (1,2-Diphenylhydrazine) | NO | NO | YES | NO |
| 123-39-7 | N-methylformamide | NO | NO | NO | YES |
| 123-91-1 | 1,4-Dioxane | NO | NO | YES | NO |
| 12427-38-2 | Maneb | YES | NO | YES | NO |
| 12510-42-8 | Erionite | NO | NO | YES | NO |
| 12656-85-8 | C.I. Pigment Red 104 | NO | NO | NO | YES |
| 12672-29-6 | PCB (Aroclor) 1248 | YES | NO | NO | NO |
| 126-72-7 | Tris(2,3-dibromopropyl)phosphate | NO | NO | YES | NO |
| 126-99-8 | Chloroprene | NO | NO | YES | NO |
| 1271-28-9 | Nickelocene | NO | NO | YES | NO |
| 127-18-4 | Perchloroethylene | YES | NO | YES | NO |
| 127-19-5 | N,N-Dimethylacetamide | NO | NO | NO | YES |
| 12789-03-6 | Chlordane | YES | NO | NO | NO |
| 128-03-0 | Potassium dimethyldithiocarbamate | NO | NO | NO | YES |
| 128-04-1 | Sodium dimethyldithiocarbamate | NO | NO | NO | YES |
| 129-15-7 | 2-Methyl-1-nitroanthraquinone (of uncertain purity) | NO | NO | YES | NO |
| 129-43-1 | 1-Hydroxyanthraquinone | NO | NO | YES | NO |
| 1303-00-0 | Gallium arsenide | NO | NO | YES | NO |
| 1304-56-9 | Beryllium oxide | NO | NO | YES | NO |
| 1307-96-6 | Cobalt [II] oxide | NO | NO | YES | NO |
| 1309-64-4 | Antimony oxide (Antimony trioxide) | NO | NO | YES | NO |
| 1313-99-1 | Nickel oxide | NO | NO | YES | NO |
| 1314-20-1 | Thorium dioxide | NO | NO | YES | NO |
| 1314-62-1 | Vanadium pentoxide (orthorhombic crystalline form) | NO | NO | YES | NO |
| 13194-48-4 | Ethoprop | NO | NO | YES | NO |
| 132-27-4 | o-Phenylphenate, sodium | NO | NO | YES | NO |
| 133-06-2 | Captan | NO | NO | YES | NO |
| 133-07-3 | Folpet | NO | NO | YES | NO |

| CASRN | Chemical Name | Endocrine Disruptor | PBT | Carcin | Reproductive Tox |
|-------------|---|---------------------|-----|--------|------------------|
| 1332-21-4 | Asbestos | NO | NO | YES | NO |
| 1333-86-4 | Carbon black (airborne, unbound particles of respirable size) | NO | NO | YES | NO |
| 1335-32-6 | lead acetate | NO | NO | YES | YES |
| 1336-36-3 | Polychlorinated biphenyl (PCB) | YES | YES | YES | YES |
| 13424-46-9 | lead azide | NO | NO | NO | YES |
| 134-29-2 | o-Anisidine hydrochloride | NO | NO | YES | NO |
| 134-32-7 | 1-Naphthylamine | NO | NO | YES | NO |
| 1344-37-2 | C.I.Pigment Yellow 34 | NO | NO | NO | YES |
| 13463-39-3 | Nickel carbonyl | NO | NO | YES | YES |
| 13463-67-7 | Titanium dioxide | NO | NO | YES | NO |
| 13510-49-1 | Beryllium sulfate | NO | NO | YES | NO |
| 135-20-6 | Cupferron | NO | NO | YES | NO |
| 13552-44-8 | 4,4'-Methylenedianiline dihydrochloride | NO | NO | YES | NO |
| 136-35-6 | Diazoaminobenzene | NO | NO | YES | NO |
| 136-45-8 | Di-n-propyl isocinchomeronate (MGK Repellent 326) | NO | NO | YES | NO |
| 13654-09-6 | Decabrominated diphenyl ether (decaBDE) | YES | NO | NO | NO |
| 137-17-7 | 2,4,5-Trimethylaniline (and its strong acid salts) | NO | NO | YES | NO |
| 137-26-8 | Thiram | YES | NO | NO | NO |
| 137-30-4 | Ziram | YES | NO | NO | NO |
| 137-42-8 | Metam Sodium | YES | NO | YES | YES |
| 138-93-2 | Disodium cyanodithioimidocarbonate | NO | NO | NO | YES |
| 139-13-9 | Nitrilotriacetic acid | NO | NO | YES | NO |
| 139-65-1 | 4,4'-Thiodianiline | NO | NO | YES | NO |
| 140-57-8 | Aramite | NO | NO | YES | NO |
| 140-66-9 | 4-Tert-Octylphenol | YES | NO | NO | NO |
| 140-88-5 | Ethyl acrylate | NO | NO | YES | NO |
| 140923-17-7 | Iprovalicarb | NO | NO | YES | NO |
| 140923-25-7 | Iprovalicarb | NO | NO | YES | NO |
| 1420-07-1 | Dinoterb (plus salts and esters) | NO | NO | NO | YES |
| 142-04-1 | Aniline hydrochloride | NO | NO | YES | NO |
| 142-59-6 | Nabam | NO | NO | NO | YES |
| 142-83-6 | 2,4-Hexadienal (89% trans, trans isomer; 11% cis, trans isomer) | NO | NO | YES | NO |
| 143-50-0 | Chlordecone (Kepone) | YES | NO | YES | YES |
| 1461-25-2 | Tetrabutyltin (TTBT) | YES | NO | NO | NO |
| 1464-53-5 | Diepoxybutane | NO | NO | YES | NO |
| 14808-60-7 | Silica, crystalline (respirable size) | NO | NO | YES | NO |
| 151-56-4 | Ethyleneimine | NO | NO | YES | NO |
| 15245-44-0 | lead 2,4,6-trinitroresorcin oxide, styphnate LEAD | NO | NO | NO | YES |
| 153-78-6 | 2-Aminofluorene | NO | NO | YES | NO |
| 15541-45-4 | Bromate | NO | NO | YES | NO |
| 156-10-5 | p-Nitrosodiphenylamine | NO | NO | YES | NO |
| 1570-64-5 | 4-chloro-2-methylphenol | YES | NO | NO | NO |
| 1582-09-8 | Trifluralin | NO | YES | NO | NO |
| 1589-47-5 | 2-Methoxypropanol | NO | NO | NO | YES |
| 1596-84-5 | Daminozide | NO | NO | YES | NO |
| 15972-60-8 | Alachlor | YES | NO | YES | NO |

| CASRN | Chemical Name | Endocrine Disruptor | PBT | Carcin | Reproductive Tox |
|------------|--|---------------------|-----|--------|------------------|
| 16071-86-6 | Direct Brown 95 (technical grade) | NO | NO | YES | NO |
| 1615-80-1 | 1,2-Diethylhydrazine | NO | NO | YES | NO |
| 16543-55-8 | N-Nitrososornicotine | NO | NO | YES | NO |
| 1675-54-3 | 2,2'-bis(4-(2,3-epoxypropoxy)phenyl)propane | YES | NO | NO | NO |
| 1689-84-5 | Bromoxynil | NO | NO | NO | YES |
| 1689-99-2 | Bromoxynil octanoate | NO | NO | NO | YES |
| 1694-09-3 | Benzyl violet 4B | NO | NO | YES | NO |
| 1746-01-6 | 2,3,7,8 Tetrachlorodibenzo-p-dioxin | YES | YES | YES | YES |
| 17570-76-2 | lead (II) methanesulphonate | NO | NO | NO | YES |
| 17804-35-2 | Benomyl | NO | NO | NO | YES |
| 1836-75-5 | Nitrofen | YES | NO | YES | YES |
| 18662-53-8 | Nitrilotriacetic acid, trisodium salt monohydrate | NO | NO | YES | NO |
| 189-55-9 | Benzo(r,s,t)pentaphene | NO | YES | YES | NO |
| 189-64-0 | Dibenzo[a,h]pyrene | NO | NO | YES | NO |
| 189-64-4 | Dibenzo(a,h)pyrene | NO | YES | NO | NO |
| 1897-45-6 | Chlorothalonil | NO | NO | YES | NO |
| 1912-24-9 | Atrazine | YES | NO | NO | NO |
| 191-24-2 | Benzo(g,h,i)perylene | NO | YES | NO | NO |
| 191-30-0 | Dibenzo(a,l)pyrene | NO | YES | YES | NO |
| 1918-16-7 | Propachlor | NO | NO | YES | NO |
| 192-65-4 | Dibenzo(a,e)pyrene | NO | YES | YES | NO |
| 1929-82-4 | Nitrapyrin | NO | NO | YES | YES |
| 193-39-5 | Indeno [1,2,3-cd]pyrene | NO | YES | YES | NO |
| 1937-37-7 | Direct Black 38 (technical grade) | NO | NO | YES | NO |
| 19408-74-3 | 1,2,3,7,8,9 Hexachlorodibenzop-dioxin | NO | YES | NO | NO |
| 194-59-2 | 7H-Dibenzo(c,g)carazole | NO | YES | YES | NO |
| 195-19-7 | Benzo[c]phenanthrene | NO | NO | YES | NO |
| 19666-30-9 | Oxadiazon | NO | NO | YES | YES |
| 1983-10-4 | Stannane, tributylfluoro- Me [Tributyltin fluoride] | YES | NO | NO | NO |
| 202-33-5 | Benz[j]aceanthrylene | NO | NO | YES | NO |
| 20265-96-7 | p-Chloroaniline hydrochloride | NO | NO | YES | NO |
| 20325-40-0 | 3,3'-Dimethoxybenzidine dihydrochloride | NO | NO | YES | NO |
| 20354-26-1 | Methazole | NO | NO | NO | YES |
| 205-82-3 | Benzo(j)fluoranthene | NO | YES | YES | NO |
| 205-99-2 | Benzo(b)fluoranthene | NO | YES | YES | NO |
| 206-44-0 | Benzo(j,k)fluorene; Fluoranthene | NO | YES | NO | NO |
| 207-08-9 | Benzo(k)fluoranthene | NO | YES | YES | NO |
| 2092-56-0 | D&C Red No. 8 | NO | NO | YES | NO |
| 2155-70-6 | Tributyl[(2-methyl-1-oxo-2-propenyl)oxy]stannane; tributyltin methacrylate | YES | NO | NO | YES |
| 21725-46-2 | Cyanazine | NO | NO | NO | YES |
| 218-01-9 | Benzo(a)phenanthrene (Chrysene) | NO | YES | YES | NO |
| 22398-80-7 | Indium phosphide | NO | NO | YES | NO |
| 224-42-0 | Dibenz[a,j]acridine | NO | YES | YES | NO |
| 22506-53-2 | 3,9-Dinitrofluoranthene | NO | NO | YES | NO |
| 226-36-8 | Dibenz[a,h]acridine | NO | YES | YES | NO |
| 2279-76-7 | Tri-n-propyltin (TPrT) | YES | NO | NO | NO |

| CASRN | Chemical Name | Endocrine Disruptor | PBT | Carcin | Reproductive Tox |
|------------|---|---------------------|-----|--------|------------------|
| 22967-92-6 | Methylmercury | NO | NO | NO | YES |
| 2312-35-8 | Propargite | NO | NO | YES | YES |
| 23564-05-8 | Thiophanate methyl | NO | NO | NO | YES |
| 2385-85-5 | Mirex | YES | NO | YES | NO |
| 23950-58-5 | Pronamide | NO | NO | YES | NO |
| 24124-25-2 | Stannane, tributyl[(1-oxo-9,12-octadecad | YES | NO | NO | NO |
| 2425-06-1 | Captafol | NO | NO | YES | NO |
| 2429-74-5 | C.I. Direct Blue 15 | NO | NO | YES | NO |
| 2437-79-8 | PCB 47 (2,2',4,4'-Tetrachlorobiphenyl) | YES | NO | NO | NO |
| 2439-01-2 | Oxythioquinox (Chinomethionat) | NO | NO | YES | YES |
| 24602-86-6 | Tridemorph (ISO);2,6-dimethyl-4-tride- cylmorpholine | NO | NO | NO | YES |
| 2475-45-8 | Disperse Blue 1 | NO | NO | YES | NO |
| 25013-16-5 | Butylated hydroxyanisole | NO | NO | YES | NO |
| 25154-52-3 | Phenol, nonyl- (2,6-dimethyl-4- heptylphenol, o and p) | YES | NO | NO | NO |
| 25321-14-6 | Dinitrotoluene (technical grade) | NO | NO | YES | YES |
| 25808-74-6 | lead hexafluorosilicate | NO | NO | NO | YES |
| 2593-15-9 | Terrazole | NO | NO | YES | NO |
| 25962-77-0 | trans-2-[(Dimethylamino)methylimino]-5- [2-(5-nitro-2-furyl)-vinyl]-1,3,4-oxadiazole | NO | NO | YES | NO |
| 2602-46-2 | Direct Blue 6 (technical grade) | NO | NO | YES | NO |
| 26148-68-5 | A-alpha-C (2-Amino-9H-pyrido[2,3- b]indole) | NO | NO | YES | NO |
| 26239-64-5 | Stannane, tributyl[[[1,2,3,4,4a,4b,5,6,1 | YES | NO | NO | NO |
| 26354-18-7 | 2-propenoic acid, 2-methyl-, methyl ester = Stannane, tributylmeacrylate | YES | NO | NO | NO |
| 2646-17-5 | Oil Orange SS | NO | NO | YES | NO |
| 26471-62-5 | Toluene diisocyanate | NO | NO | YES | NO |
| 26636-32-8 | Tributyltinnaphthalate | YES | NO | NO | NO |
| 26644-46-2 | Triforine | NO | NO | NO | YES |
| 26761-40-0 | Diisodecyl phthalate | YES | NO | NO | YES |
| 271-89-6 | Benzofuran | NO | NO | YES | NO |
| 27208-37-3 | Cyclopenta[cd]pyrene | NO | NO | YES | NO |
| 27304-13-8 | Oxychlordane | YES | NO | NO | NO |
| 2784-94-3 | HC Blue 1 | NO | NO | YES | NO |
| 28407-37-6 | C.I. Direct Blue 218 | NO | NO | YES | NO |
| 28434-86-8 | 3,3'-Dichloro-4,4'-diamino-diphenyl ether | NO | NO | YES | NO |
| 28553-12-0 | diisononyl phthalate = 1,2- Benzenedicarboxylic acid, diisononyl ester (DINP) | YES | NO | NO | NO |
| 29082-74-4 | Octachlorostyrene | NO | YES | NO | NO |
| 2973-10-6 | Diisopropyl sulfate | NO | NO | YES | NO |
| 298-00-0 | Methylparathion | YES | NO | NO | NO |
| 301-04-2 | Lead acetate | NO | NO | YES | YES |
| 301-12-2 | Oxydemeton methyl | NO | NO | NO | YES |
| 302-01-2 | Hydrazine | NO | NO | YES | NO |
| 3068-88-0 | beta-Butyrolactone | NO | NO | YES | NO |
| 309-00-2 | Aldrin | YES | YES | YES | NO |
| 3090-35-5 | Stannane, tributyl[(1-oxo-9-octadecenyl) | YES | NO | NO | NO |

| CASRN | Chemical Name | Endocrine Disruptor | PBT | Carcin | Reproductive Tox |
|-------------|---|---------------------|-----|--------|------------------|
| 31508-00-6 | 2,3',4,4',5 Pentachlorobiphenyl | NO | YES | NO | NO |
| 3165-93-3 | p-Chloro-o-toluidine, hydrochloride | NO | NO | YES | NO |
| 32534-81-9 | Pentabrominated diphenyl ether (pentaBDE) | YES | NO | NO | NO |
| 32536-52-0 | Octabrominated diphenyl ether (octaBDE) | YES | NO | NO | NO |
| 32598-12-2 | PCB 75 (2,4,4',6-Tetrachlorobiphenyl) | YES | NO | NO | NO |
| 32598-13-3 | 3,4,3',4'-Tetrachlorobiphenyl | YES | YES | NO | NO |
| 32598-14-4 | 2,3,3',4,4' Pentachlorobiphenyl | NO | YES | NO | NO |
| 3268-87-9 | 1,2,3,4,6,7,8,9 Octachlorodibenzo-p-dioxin | NO | YES | NO | NO |
| 32774-16-6 | 3,3',4,4',5,5' Hexachlorobiphenyl | YES | YES | NO | NO |
| 32809-16-8 | Procymidone | NO | NO | YES | NO |
| 3296-90-0 | 2,2-Bis(bromomethyl)-1,3-propanediol | NO | NO | YES | NO |
| 330-54-1 | Diuron | YES | NO | YES | NO |
| 330-55-2 | Linuron | YES | NO | NO | YES |
| 33089-61-1 | Amitraz | NO | NO | NO | YES |
| 33213-65-9 | Endosulfan (beta) | YES | NO | NO | NO |
| 33284-53-6 | PCB 61 (2,3,4,5-Tetrachlorobiphenyl) | YES | NO | NO | NO |
| 3333-67-3 | Nickel carbonate | NO | NO | YES | NO |
| 333-41-5 | Diazinon | YES | NO | NO | NO |
| 34256-82-1 | Acetochlor | YES | NO | YES | NO |
| 34465-46- 8 | Hexachlorodibenzodioxin | NO | NO | YES | NO |
| 3468-63-1 | D&C Orange No. 17 | NO | NO | YES | NO |
| 35065-27-1 | PCB 153 (2,2',4,4',5,5'-Hexachlorobiphenyl) | YES | NO | NO | NO |
| 3563-45-9 | Tetrachloro DDT [1,1,1,2-Tetrachloro-2,2-bis(4-chlorophenyl)ethane] | YES | NO | NO | NO |
| 3564-09-8 | Ponceau 3R | NO | NO | YES | NO |
| 3570-75-0 | 2-(2-Formylhydrazino)-4-(5-nitro-2-furyl)thiazole | NO | NO | YES | NO |
| 35822-46-9 | 1,2,3,4,6,7,8 Heptachlorodibenzo-p-dioxin | NO | YES | NO | NO |
| 36631-23-9 | Stannane, tributyl = Tributyltin naphthalate | YES | NO | NO | NO |
| 36734-19-7 | Iprodione | YES | NO | YES | NO |
| 3688-53-7 | AF-2;[2-(2-furyl)-3-(5-nitro-2-furyl)]acrylamide | NO | NO | YES | NO |
| 3697-24-3 | 5-Methylchrysene | NO | YES | YES | NO |
| 373-02-4 | Nickel acetate | NO | NO | YES | NO |
| 3761-53-3 | Ponceau MX | NO | NO | YES | NO |
| 37894-46-5 | 6-(2-chloroethyl)-6(2-methoxyethoxy)-2,5,7,10-tetraoxa-6-silaundecane | NO | NO | NO | YES |
| 38380-08-4 | 2,3,3',4,4',5 Hexachlorobiphenyl | YES | YES | NO | NO |
| 38411-22-2 | PCB 136 (2,2',3,3',6,6'-Hexachlorobiphenyl) | YES | NO | NO | NO |
| 39001-02-0 | 1,2,3,4,6,7,8,9 Octachlorodibenzofuran | NO | YES | NO | NO |
| 39156-41-7 | 2,4-Diaminoanisoole sulfate | NO | NO | YES | NO |
| 39227-28-6 | 1,2,3,4,7,8 Hexachlorodibenzop-dioxin | NO | YES | NO | NO |
| 39300-45-3 | Dinocap | NO | NO | NO | YES |
| 39635-31-9 | 2,3,3',4,4',5,5' Heptachlorobiphenyl | NO | YES | NO | NO |
| 39801-14-4 | Photomirex | YES | NO | NO | NO |
| 40088-47-9 | 2,2',4,4'-Tetrabrominated diphenyl ether (2,2',4,4'-tetraBDE) | YES | NO | NO | NO |
| 40321-76-4 | 1,2,3,7,8 Pentachlorodibenzodioxin | YES | YES | NO | NO |

| CASRN | Chemical Name | Endocrine Disruptor | PBT | Carcin | Reproductive Tox |
|------------|--|---------------------|-----|--------|------------------|
| 40487-42-1 | Pendimethalin | NO | YES | NO | NO |
| 42397-64-8 | 1,6-Dinitropyrene | NO | NO | YES | NO |
| 42397-65-9 | 1,8-Dinitropyrene | NO | NO | YES | NO |
| 4342-30-7 | Phenol, 2-[[tributylstannyl]oxy]carbony | YES | NO | NO | NO |
| 4342-36-3 | Stannane, (benzoyloxy)tributyl- [tributyltin benzoate] | YES | NO | NO | NO |
| 465-73-6 | Isodrin | NO | YES | NO | NO |
| 4782-29-0 | Stannane, [1,2-phenylenebis(carbonyloxy) | YES | NO | NO | NO |
| 485-31-4 | binapacryl (ISO) | NO | NO | NO | YES |
| 50-00-0 | Formaldehyde | NO | NO | YES | NO |
| 50-29-3 | DDT (Dichlorodiphenyl-trichloroethane) | YES | NO | YES | YES |
| 50-32-8 | Benzo(a)pyrene | NO | YES | YES | YES |
| 509-14-8 | Tetranitromethane | NO | NO | YES | NO |
| 510-15-6 | Ethyl-4,4'-dichlorobenzilate | NO | NO | YES | NO |
| 51207-31-9 | 2,3,7,8 Tetrachlorodibenzofuran | YES | YES | NO | NO |
| 512-56-1 | Trimethyl phosphate | NO | NO | YES | NO |
| 513-37-1 | Dimethylvinylchloride | NO | NO | YES | NO |
| 51338-27-3 | Diclofop methyl | NO | NO | NO | YES |
| 5160-02-1 | D&C Red No. 9 | NO | NO | YES | NO |
| 51-79-6 | Urethane (Ethyl carbamate) | NO | NO | YES | YES |
| 5216-25-1 | p-a,a,a-Tetrachlorotoluene | NO | NO | YES | NO |
| 52663-72-6 | 2,3',4,4',5,5' Hexachlorobiphenyl | NO | YES | NO | NO |
| 528-29-0 | o-Dinitrobenzene | NO | NO | NO | YES |
| 53404-19-6 | Bromacil lithium salt | NO | NO | NO | YES |
| 53469-21-9 | PCB (Aroclor) 1242 | YES | NO | NO | NO |
| 53-70-3 | Dibenz[a,h]anthracene | NO | YES | YES | NO |
| 5385-75-1 | Dibenzo(a,e)fluoranthene | NO | YES | NO | NO |
| 53-96-3 | 2-Acetylamino fluorene | NO | NO | YES | NO |
| 540-73-8 | 1,2-Dimethylhydrazine | NO | NO | YES | NO |
| 542-56-3 | Isobutyl nitrite | NO | NO | YES | NO |
| 542-75-6 | 1,3-Dichloropropene | NO | NO | YES | NO |
| 542-88-1 | Bis(chloromethyl)ether | NO | NO | YES | NO |
| 546-88-3 | Acetohydroxamic acid | NO | NO | NO | YES |
| 55-18-5 | N-Nitrosodiethylamine | NO | NO | YES | NO |
| 5522-43-0 | 1-Nitropyrene | NO | YES | YES | NO |
| 556-52-5 | 2,3-Epoxypropan-1-ol; glycidol | NO | NO | YES | YES |
| 55673-89-7 | 1,2,3,4,7,8,9 Heptachlorodibenzofuran | NO | YES | NO | NO |
| 55738-54-0 | trans-2-[(Dimethylamino)methylimino]-5- [2-(5-nitro-2-furyl)vinyl]-1,3,4-oxadiazole | NO | NO | YES | NO |
| 56-23-5 | Carbon tetrachloride | NO | NO | YES | NO |
| 563-47-3 | 3-Chloro-2-methylpropene | NO | NO | YES | NO |
| 56-35-9 | Tributyltin oxide = bis(tributyltin) oxide | YES | NO | NO | NO |
| 56-38-2 | Parathion [Parathion(-ethyl)] | YES | NO | NO | NO |
| 56-49-5 | 3-Methyl chlolanthrene | NO | YES | YES | NO |
| 56-55-3 | Benz(a)anthracene | NO | YES | YES | NO |
| 569-57-3 | Chlorotrianisene | NO | NO | YES | NO |
| 569-61-9 | C.I. Basic Red 9 monohydrochloride | NO | NO | YES | NO |
| 57018-52-7 | Propylene glycol mono-t-butyl ether | NO | NO | YES | NO |
| 57044-25-4 | R-2,3-epoxy-1-propanol | NO | NO | NO | YES |
| 57117-31-4 | 2,3,4,7,8 Pentachlorodibenzofuran | YES | YES | NO | NO |

| CASRN | Chemical Name | Endocrine Disruptor | PBT | Carcin | Reproductive Tox |
|------------|--|---------------------|-----|--------|------------------|
| 57117-41-6 | 1,2,3,7,8 Pentachlorodibenzofuran | YES | YES | NO | NO |
| 57117-44-9 | 1,2,3,6,7,8 Hexachlorodibenzofuran | NO | YES | NO | NO |
| 57-14-7 | 1,1-Dimethylhydrazine (UDMH) | NO | NO | YES | NO |
| 57465-28-8 | 3,4,5,3',4'-Pentachlorobiphenyl | NO | YES | NO | NO |
| 57-57-8 | beta-Propiolactone | NO | NO | YES | NO |
| 57653-85-7 | 1,2,3,6,7,8 Hexachlorodibenzop-dioxin | NO | YES | NO | NO |
| 57-74-9 | Chlordane | YES | YES | YES | NO |
| 57835-92-4 | 4-Nitropyrene | NO | NO | YES | NO |
| 57852-57-0 | Idarubicin hydrochloride | NO | NO | NO | YES |
| 57-97-6 | 7,12-Dimethylbenz(a)anthracene | NO | YES | YES | NO |
| 58802-20-3 | 1,2,7,8-Tetrachlorodibenzofuran | YES | NO | NO | NO |
| 58-89-9 | Gamma-HCH (Lindane) | YES | NO | YES | NO |
| 5902-51-2 | Terbacil | NO | NO | NO | YES |
| 590-96-5 | Methylazoxymethanol | NO | NO | YES | NO |
| 592-62-1 | Methylazoxymethanol acetate | NO | NO | YES | YES |
| 593-60-2 | Vinyl bromide | NO | NO | YES | NO |
| 59-50-7 | 4-chloro-3-methylphenol | YES | NO | NO | NO |
| 59536-65-1 | Polybrominated Biphenyls (PBB) [209 Congeners] | YES | NO | YES | YES |
| 59669-26-0 | Thiodicarb | NO | NO | YES | NO |
| 598-55-0 | Methyl carbamate | NO | NO | YES | NO |
| 59-89-2 | N-Nitrosomorpholine | NO | NO | YES | NO |
| 60-09-3 | p-Aminoazobenzene | NO | NO | YES | NO |
| 60-11-7 | 4-Dimethylaminoazobenzene | NO | NO | YES | NO |
| 602-87-9 | 5-Nitroacenaphthene | NO | NO | YES | NO |
| 60-35-5 | Acetamide | NO | NO | YES | NO |
| 60-57-1 | Dieldrin | YES | NO | YES | NO |
| 606-20-2 | 2,6-Dinitrotoluene | NO | NO | YES | YES |
| 607-57-8 | 2-Nitrofluorene | NO | NO | YES | NO |
| 60851-34-5 | 2,3,4,7,8,9 Hexachlorodibenzofuran | NO | YES | NO | NO |
| 608-73-1 | Hexachlorocyclohexane (technical grade) | NO | NO | YES | NO |
| 608-93-5 | Pentachlorobenzene | NO | YES | NO | NO |
| 6109-97-3 | 3-Amino-9-ethylcarbazole hydrochloride | NO | NO | YES | NO |
| 612-82-8 | 3,3'-Dimethylbenzidine dihydrochloride | NO | NO | YES | NO |
| 612-83-9 | 3,3'-Dichlorobenzidine dihydrochloride | NO | NO | YES | NO |
| 613-35-4 | N,N'-Diacetylbenzidine | NO | NO | YES | NO |
| 615-05-4 | 2,4-Diaminoanisole | NO | NO | YES | NO |
| 615-28-1 | o-Phenylenediamine dihydrochloride | NO | NO | YES | NO |
| 615-53-2 | N-Nitroso-N-methylurethane | NO | NO | YES | NO |
| 621-64-7 | N-Nitrosodi-n-propylamine | NO | NO | YES | NO |
| 62476-59-9 | Acifluorfen sodium | NO | NO | YES | NO |
| 62-50-0 | Ethyl methanesulfonate | NO | NO | YES | NO |
| 62-53-3 | Aniline | NO | NO | YES | NO |
| 625-45-6 | Methoxyacetic acid | NO | NO | NO | YES |
| 62-55-5 | Thioacetamide | NO | NO | YES | NO |
| 62-56-6 | Thiourea | NO | NO | YES | NO |
| 62-73-7 | DDVP (Dichlorvos) | NO | NO | YES | NO |
| 62-74-8 | Sodium fluoroacetate | NO | NO | NO | YES |
| 62-75-9 | N-Nitrosodimethylamine | NO | NO | YES | NO |

| CASRN | Chemical Name | Endocrine Disruptor | PBT | Carcin | Reproductive Tox |
|------------|--|---------------------|-----|--------|------------------|
| 630-08-0 | carbon monoxide | NO | NO | NO | YES |
| 6358-53-8 | Citrus Red No. 2 | NO | NO | YES | NO |
| 636-21-5 | o-Toluidine hydrochloride | NO | NO | YES | NO |
| 64091-91-4 | 4-(N-Nitrosomethylamino)-1-(3-pyridyl)1-butanone | NO | NO | YES | NO |
| 6459-94-5 | C.I. Acid Red 114 | NO | NO | YES | NO |
| 64-67-5 | Diethyl sulfate | NO | NO | YES | NO |
| 64902-72-3 | Chlorsulfuron | NO | NO | NO | YES |
| 65510-44-3 | 2',3,4,4',5-pentachlorobiphenyl | NO | YES | NO | NO |
| 66-27-3 | Methyl methanesulfonate | NO | NO | YES | NO |
| 66441-23-4 | Fenoxaprop ethyl | NO | NO | NO | YES |
| 66733-21-9 | Erionite | NO | NO | YES | NO |
| 668-34-8 | Triphenyltin | YES | NO | NO | NO |
| 67562-39-4 | 1,2,3,4,6,7,8 Heptachlorodibenzofuran | NO | YES | NO | NO |
| 67-66-3 | Chloroform | NO | NO | YES | NO |
| 67-72-1 | Hexachloroethane | NO | NO | YES | NO |
| 67730-10-3 | Glu-P-2 (2-Aminodipyrido[1,2-a:3',2'-d]imidazole) | NO | NO | YES | NO |
| 67730-11-4 | Glu-P-1 (2-Amino-6-methyldipyrido[1,2-a:3',2'-d]imidazole) | NO | NO | YES | NO |
| 67733-57-7 | 2,3,7,8-Tetrabromodibenzofuran | YES | NO | NO | NO |
| 67747-09-5 | Prochloraz | YES | NO | NO | NO |
| 68006-83-7 | Me-A-alpha-C (2-Amino-3-methyl-9H-pyrido[2,3-b]indole) | NO | NO | YES | NO |
| 68-12-2 | N,N-dimethylformamide | NO | NO | NO | YES |
| 68515-49-1 | Di-isodecyl phthalate (DIDP) | NO | NO | NO | YES |
| 688-73-3 | Tributyltin | YES | NO | NO | NO |
| 69409-94-5 | Fluvalinate | NO | NO | NO | YES |
| 69782-90-7 | 2,3,3',4,4',5' Hexachlorobiphenyl | NO | YES | NO | NO |
| 69806-50-4 | Fluazifop butyl | NO | NO | NO | YES |
| 70-25-7 | N-Methyl-N'-nitro-N-nitrosoguanidine | NO | NO | YES | NO |
| 70362-47-9 | PCB 48 (2,2',4,5-Tetrachlorobiphenyl) | YES | NO | NO | NO |
| 70648-26-9 | 1,2,3,4,7,8 Hexachlorodibenzofuran | NO | YES | NO | NO |
| 70657-70-4 | 2-Methoxypropylacetate | NO | NO | NO | YES |
| 709-98-8 | Propanil | YES | NO | NO | NO |
| 712-68-5 | 2-Amino-5-(5-nitro-2-furyl)-1,3,4-thiadiazole | NO | NO | YES | NO |
| 71-43-2 | Benzene | NO | NO | YES | YES |
| 71998-72-6 | 1,3,6,8-Tetrachlorodibenzofuran | YES | NO | NO | NO |
| 72-20-8 | Endrin | YES | NO | NO | YES |
| 72-43-5 | Methoxychlor | NO | YES | NO | NO |
| 72490-01-8 | Fenoxycarb | NO | NO | YES | NO |
| 72-54-8 | DDD (Dichlorodiphenyl-dichloroethane) | NO | NO | YES | NO |
| 72-55-9 | DDE (Dichlorodiphenyl-dichloroethylene) | NO | NO | YES | NO |
| 72-57-1 | Trypan blue (commercial grade) | NO | NO | YES | NO |
| 72918-21-9 | 1,2,3,7,8,9 Hexachlorodibenzofuran | NO | YES | NO | NO |
| 7439-92-1 | Lead | NO | YES | YES | NO |
| 7439-97-6 | Mercury | NO | YES | NO | YES |
| 7440-02-0 | Nickel (Metallic) | NO | NO | YES | NO |
| 7440-38-2 | Arsenic and arsenic compounds | NO | NO | YES | NO |
| 7440-41-7 | Beryllium and beryllium compounds | NO | NO | YES | NO |

| CASRN | Chemical Name | Endocrine Disruptor | PBT | Carcin | Reproductive Tox |
|------------|---|---------------------|-----|--------|------------------|
| 7440-43-9 | Cadmium and cadmium compounds | NO | NO | YES | YES |
| 7440-48-4 | Cobalt metal powder | NO | NO | YES | NO |
| 7446-27-7 | Lead phosphate | NO | NO | YES | YES |
| 7446-34-6 | Selenium sulfide | NO | NO | YES | NO |
| 74472-37-0 | 2,3,4,4',5 Pentachlorobiphenyl | NO | YES | NO | NO |
| 74-83-9 | Methyl bromide, as a structural fumigant | YES | NO | NO | YES |
| 74-87-3 | Methyl chloride | NO | NO | NO | YES |
| 74-88-4 | Methyl iodide | NO | NO | YES | NO |
| 7496-02-8 | 6-Nitrochrysene | NO | NO | YES | NO |
| 74-96-4 | Bromoethane | NO | NO | YES | NO |
| 75-00-3 | Chloroethane (Ethyl chloride) | NO | NO | YES | NO |
| 75-01-4 | Vinyl chloride | NO | NO | YES | NO |
| 75-02-5 | Vinyl fluoride | NO | NO | YES | NO |
| 75-07-0 | Acetaldehyde | NO | NO | YES | NO |
| 75-09-2 | Dichloromethane (Methylene chloride) | NO | NO | YES | NO |
| 75-12-7 | Formamide | NO | NO | NO | YES |
| 75-15-0 | Carbon disulfide | YES | NO | NO | YES |
| 75-21-8 | Ethylene oxide | NO | NO | YES | YES |
| 75-25-2 | Bromoform | NO | NO | YES | NO |
| 75-26-3 | 2-bromopropane | NO | NO | NO | YES |
| 75-27-4 | Bromodichloromethane | NO | NO | YES | NO |
| 75-34-3 | 1,1-Dichloroethane | NO | NO | YES | NO |
| 75-52-5 | Nitromethane | NO | NO | YES | NO |
| 75-55-8 | 2-Methylaziridine (Propyleneimine) | NO | NO | YES | NO |
| 75-56-9 | Propylene oxide | NO | NO | YES | NO |
| 75-60-5 | Cacodylic acid | NO | NO | YES | NO |
| 759-94-4 | Ethyl dipropylthiocarbamate | NO | NO | NO | YES |
| 76180-96-6 | IQ (2-Amino-3-methylimidazo[4,5-f]quinoline) | NO | NO | YES | NO |
| 764-41-0 | 1,4-Dichloro-2-butene | NO | NO | YES | NO |
| 76-44-8 | Heptachlor | YES | YES | YES | YES |
| 765-34-4 | Glycidaldehyde | NO | NO | YES | NO |
| 76578-14-8 | Quizalofop-ethyl | NO | NO | NO | YES |
| 76-87-9 | Triphenyltin hydroxide | NO | NO | YES | YES |
| 77094-11-2 | MeIQ (2-Amino-3,4-dimethylimidazo[4,5-f]quinoline) | NO | NO | YES | NO |
| 77-09-8 | Phenolphthalein | NO | NO | YES | NO |
| 77439-76-0 | MX (3-chloro-4-dichloromethyl-5-hydroxy-2(5H)-furanone) | NO | NO | YES | NO |
| 77501-63-4 | Lactofen | NO | NO | YES | NO |
| 7758-01-2 | Potassium bromate | NO | NO | YES | NO |
| 7758-97-6 | lead chromate | NO | NO | NO | YES |
| 77-78-1 | Dimethyl sulfate | NO | NO | YES | NO |
| 7784-40-9 | lead hydrogen arsenate | NO | NO | NO | YES |
| 7790-79-6 | Cadmium fluoride | NO | NO | NO | YES |
| 78-79-5 | Isoprene | NO | NO | YES | NO |
| 78-87-5 | 1,2-Dichloropropane | NO | NO | YES | NO |
| 789-02-6 | o,p'-DDT | NO | NO | NO | YES |
| 79-00-5 | Vinyl trichloride (1,1,2-Trichloroethane) | NO | NO | YES | NO |
| 79-01-6 | Trichloroethylene | NO | NO | YES | NO |

| CASRN | Chemical Name | Endocrine Disruptor | PBT | Carcin | Reproductive Tox |
|------------|--|---------------------|-----|--------|------------------|
| 79-06-1 | Acrylamide | NO | NO | YES | NO |
| 79-16-3 | N-methylacetamide | NO | NO | NO | YES |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | NO | NO | YES | NO |
| 79-43-6 | Dichloroacetic acid | NO | NO | YES | NO |
| 79-44-7 | Dimethylcarbamoyl chloride | NO | NO | YES | NO |
| 79-46-9 | 2-Nitropropane | NO | NO | YES | NO |
| 79-94-7 | Tetrabromobisphenol A | NO | YES | NO | NO |
| 8001-35-2 | Toxaphen (Camphechlor) | YES | YES | YES | NO |
| 8001-58-9 | Creosotes | NO | NO | YES | NO |
| 80-05-7 | 2,2-Bis(4-hydroxyphenyl)propan [4,4'-isopropylidenediphenol] [Bisphenol A] | YES | NO | NO | NO |
| 8018-01-7 | Mancozeb | NO | NO | YES | NO |
| 80387-97-9 | 2-ethylhexyl 3,5-bis(1,1-dimethylethyl)-4-hydroxyphenylmethylthioacetate | NO | NO | NO | YES |
| 81-49-2 | 1-Amino-2,4-dibromoanthraquinone | NO | NO | YES | NO |
| 81-88-9 | D&C Red No. 19 | NO | NO | YES | NO |
| 82-28-0 | 1-Amino-2-methylanthraquinone | NO | NO | YES | NO |
| 83704-53-4 | 1,2,3,7,9-Pentachlorodibenzofuran | YES | NO | NO | NO |
| 838-88-0 | 4,4'-Methylene bis(2-methylaniline) | NO | NO | YES | NO |
| 842-07-9 | C.I. Solvent Yellow 14 | NO | NO | YES | NO |
| 84-65-1 | Anthraquinone | NO | NO | YES | NO |
| 84-74-2 | Dibutylphthalate (DBP) | YES | NO | NO | YES |
| 84-75-3 | Di-n-hexyl phthalate (DnHP) | NO | NO | NO | YES |
| 85409-17-2 | Stannane, tributyl-, Mono (naphthenoyloxy) | YES | NO | NO | NO |
| 85509-19-9 | Flusilazole (ISO) | NO | NO | NO | YES |
| 85-68-7 | Butyl benzyl phthalate (BBP) | YES | NO | NO | YES |
| 86-30-6 | N-Nitrosodiphenylamine | NO | NO | YES | NO |
| 86-74-8 | Carbazole | NO | NO | YES | NO |
| 872-50-4 | N-Methylpyrrolidone | NO | NO | NO | YES |
| 87-29-6 | Cinnamyl anthranilate | NO | NO | YES | NO |
| 87-62-7 | 2,6-Xylidine (2,6-Dimethylaniline) | NO | NO | YES | NO |
| 87-86-5 | Pentachlorophenol | NO | NO | YES | NO |
| 88-06-2 | 2,4,6-Trichlorophenol | NO | NO | YES | NO |
| 88671-89-0 | Myclobutanil | NO | NO | NO | YES |
| 88-72-2 | o-Nitrotoluene | NO | NO | YES | NO |
| 88-85-7 | Dinoseb (plus salts and esters) | NO | NO | NO | YES |
| 90-04-0 | o-Anisidine | NO | NO | YES | NO |
| 9006-42-2 | Metiram | NO | NO | YES | YES |
| 900-95-8 | Fentin acetate [STANNANE, ACETOXYTRIPHENYL] | YES | NO | NO | NO |
| 90-43-7 | o-phenylphenol | YES | NO | YES | NO |
| 90-94-8 | Michler's ketone | NO | NO | YES | NO |
| 91-20-3 | Naphthalene | NO | NO | YES | NO |
| 91-22-5 | Quinoline and its strong acid salts | NO | NO | YES | NO |
| 91-23-6 | o-Nitroanisole | NO | NO | YES | NO |
| 91-59-8 | 2-Naphthylamine | NO | NO | YES | NO |
| 91-94-1 | 3,3'-Dichlorobenzidine | NO | NO | YES | NO |
| 924-16-3 | N-Nitrosodi-n-butylamine | NO | NO | YES | NO |
| 924-42-5 | N-Methylolacrylamide | NO | NO | YES | NO |

| CASRN | Chemical Name | Endocrine Disruptor | PBT | Carcin | Reproductive Tox |
|----------|--|---------------------|-----|--------|------------------|
| 92-67-1 | 4-Aminobiphenyl (4-amino-diphenyl) | NO | NO | YES | NO |
| 92-87-5 | Benzidine [and its salts] | NO | NO | YES | NO |
| 92-93-3 | 4-Nitrobiphenyl | NO | NO | YES | NO |
| 930-55-2 | N-Nitrosopyrrolidine | NO | NO | YES | NO |
| 94-58-6 | Dihydrosafrole | NO | NO | YES | NO |
| 94-59-7 | Safrole | NO | NO | YES | NO |
| 94-75-7 | 2,4-Dichlorophenoxy acetic acid (2,4-D) | YES | NO | NO | NO |
| 94-82-6 | 2,4-D butyric acid | NO | NO | NO | YES |
| 95-06-7 | Sulfallate | NO | NO | YES | NO |
| 95-53-4 | o-Toluidine | NO | NO | YES | NO |
| 95-54-5 | o-Phenylenediamine | NO | NO | YES | NO |
| 95-54-5 | o-Phenylenediamine and its salts | NO | NO | YES | NO |
| 95-69-2 | p-Chloro-o-toluidine | NO | NO | YES | NO |
| 95-76-1 | 3,4-Dichloroaniline (1-amino-3,4-dichlorobenzene) | YES | NO | NO | NO |
| 95-79-4 | 5-Chloro-o-toluidine (and its strong acid salts) | NO | NO | YES | NO |
| 95-80-7 | 2,4-Diaminotoluene | NO | NO | YES | NO |
| 95-83-0 | 4-Chloro-o-phenylenediamine | NO | NO | YES | NO |
| 959-98-8 | Endosulfan (alpha) | YES | NO | NO | NO |
| 96-09-3 | Styrene oxide | NO | NO | YES | NO |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | NO | NO | YES | YES |
| 96-13-9 | 2,3-Dibromo-1-propanol | NO | NO | YES | NO |
| 96-18-4 | 1,2,3-Trichloropropane | NO | NO | YES | NO |
| 97-23-4 | Dichlorophene | NO | NO | NO | YES |
| 97-56-3 | o-Aminoazotoluene | NO | NO | YES | NO |
| 98-07-7 | Benzotrichloride | NO | NO | YES | NO |
| 98-54-4 | 4-tert-Butylphenol (1-hydroxy-4-tert-butylbenzene) | YES | NO | NO | NO |
| 98-87-3 | α-Chlorinated toluenes | NO | NO | YES | NO |
| 98-88-4 | α-Chlorinated toluenes (benzal chloride, benzo-trichloride, benzyl chloride) and benzoyl chloride (combined exposures) | NO | NO | YES | NO |
| 98-95-3 | Nitrobenzene | NO | NO | YES | NO |
| 99-65-0 | m-Dinitrobenzene | NO | NO | NO | YES |
| 99-99-0 | 4-Nitrotoluene (1-methyl-4-nitrobenzene) | YES | NO | NO | NO |

B.1 Selection Criteria for Chemicals of Concern List (Informative)²

Sustainable Research Group (SRG) was requested by the Human and Ecosystem Health Work Group to construct a master list of “chemicals of concern” for the BIFMA Sustainable Standard. Upon approval, this reference list constitutes Annex B for the fulfillment of credits available under sections 7.4 and 7.5 of the standard. An explanation of the protocol for developing the master list is provided below.

B.1.1 Selection Criteria (Informative)²

² The information contained in Annex B.1 through B.1.2 is not part of this American National Standard (ANS) and has not been processed in accordance with ANSI’s requirements for an ANS. Therefore, these sections may contain material that has not been subjected to public review or a consensus process. In addition, it does not contain requirements necessary for conformance to the Standard.

Annex B Chemicals of Concern list was constructed by applying the following criteria, as agreed upon by the Human and Ecosystem Health Work Group:

- I. Limited to “chemicals of concerns” identified as being:
 - A. *Persistent, Bioaccumulative and Toxic chemicals (PBTs)*
 - B. *Carcinogens*
 - C. *Reproductive toxicants*
 - D. *Endocrine disruptors*
- II. Compiled by merging selected chemicals from the following existing, authoritative lists:
 - A. *PBT:*
 1. EPCRA Section 313 Final Rule of PBTs – See Table 1 and Table 3
 - <http://www.epa.gov/fedrgstr/EPA-WASTE/1999/October/Day-29/f28169.htm>
 - All chemicals selected
 - B. *Carcinogens:*
 1. International Agency for Research on Cancer (IARC)
 - <http://monographs.iarc.fr/ENG/Classification/ListagentsCASnos.pdf>
 - As of most current version: Volumes 1-99; updated March 28, 2008
 - Only chemicals identified as Type 1, 2A or 2B carcinogens
 - Does not include chemicals classified as Type 3 or 4
 2. California Proposition 65
 - http://www.oehha.ca.gov/prop65/prop65_list/Newlist.html
 - As of most current version: March 21, 2008
 - All chemicals currently listed and identified by the descriptor “cancer”
 - No delisted chemicals
 3. National Toxicology Program – Report on Carcinogens (ROC) Part A and Part B
 - Part A: <http://ntp.niehs.nih.gov/ntp/roc/eleventh/known.pdf>
 - Part B: <http://ntp.niehs.nih.gov/ntp/roc/eleventh/reason.pdf>
 - As of most current version: 11th Edition
 - All chemicals classified as “Known to be a Human Carcinogen” [Part A] or “Reasonably Anticipated to be a Human Carcinogen” [Part B]
 - C. *Reproductive Toxicants*
 1. California Proposition 65
 - http://www.oehha.ca.gov/prop65/prop65_list/Newlist.html
 - As of most current version: March 21, 2008
 - All chemicals currently listed and identified by the descriptor “developmental”
 - No delisted chemicals
 2. EU Consolidated List of Carcinogenic, Mutagenic and Reproductive Toxicant Substances [EC Directive 76/769/EEC]
 - http://ec.europa.eu/enterprise/chemicals/legislation/markrestr/1976i0769_en_03_10_2007.pdf
 - All chemicals identified as being “toxic to reproduction” and classified as category 1 or category 2
 - D. *Endocrine Disruptors*
 1. EUROPEAN COMMISSION DG ENV: Towards the establishment of a priority list of substances for further evaluation of their role in endocrine disruption [Final Report 2000]
 - http://ec.europa.eu/environment/docum/pdf/bkh_annex_13.pdf
 - All chemicals having a “combined” classification of 1 or 2
 - “Combined” refers to the potential of a chemical to cause endocrine disruption in humans and wildlife: 1 = evidence for endocrine disruption; 2 = evidence for potential endocrine disruption

B.1.2 Cleanup Criteria (Informative)²

In an effort to streamline the merged lists, the following rules were applied:

- For chemicals identified by a unique Chemical Abstracts Service Registry Number (CASRN): replicate entries (records) were deleted so that each unique CASRN is represented by a single record (row) in the list. [However, multiple endpoint information per chemical was retained – see below]

- For chemicals without a unique CASRN and only identified by chemical name or a text description: replicate entries were only deleted if the text per entry was identical; if multiple entries had similar, but not identical descriptors, it was not assumed by SRG that the same “chemical” was inferred by disparate lists, even if it could be assumed to be “obvious”.
- Endpoint information is organized in separate columns with the following headings: “PBT”, “Carcinogen”, “Reproductive Toxicant” and “Endocrine Disruptor”. A single chemical record may have one or more endpoints.
- The final criteria used to formulate this list was to remove items using the following filters:
 1. Occupations
 2. Industry sectors
 3. Medicines, medicinal/medical/cosmetic uses
 4. Non-chemical (physical) agents
 5. Viruses, infectious biological agents, other biological toxins
 6. Personal use products
 7. Herbal extracts
 8. Food additives
 9. Fuel and fuel processing
- The original intent of the authoritative lists from which Annex B was generated is best served by maintaining generic classes as distinct entries, even in the absence of CASRN.
- TRI reportable chemicals that are not present on Annex B are likely absent as they do not fall into the following categories: PBT, carcinogen, endocrine disruptor, or reproductive toxicant. The missing TRI chemicals will be captured in informative references that address other life cycle impact categories such as acidification, aquatic toxicity, eutrophication, global warming, photochemical smog formation, stratospheric ozone depletion, or terrestrial toxicity.

Annex C - Individual Volatile Organic Chemical (VOC) Concentration Limits

(Updated 4/11/07)

(Normative)

| Compound Name | CASRN | MW | CREL | Workstation | Seating | Individual Components | |
|--|----------|--------|------|--|--|--|---|
| | | | | Maximum Allowable Conc. ($\mu\text{g}/\text{m}^3$) | Maximum Allowable Conc. ($\mu\text{g}/\text{m}^3$) | Open Plan Maximum Allowable Emission Factor ($\mu\text{g}/\text{m}^2\text{h}$) | Private Office Maximum Allowable Emission Factor ($\mu\text{g}/\text{m}^2\text{h}$) |
| Ethylbenzene | 100-41-4 | 106.2 | Y | 1000 | 500 | 689 | 1392 |
| Styrene | 100-42-5 | 104.2 | Y | 450 | 225 | 310 | 627 |
| p-Xylene | 106-42-3 | 106.2 | Y | 350 | 175 | 241 | 487 |
| 1,4-Dichlorobenzene | 106-46-7 | 147 | Y | 400 | 200 | 276 | 557 |
| Epichlorohydrin | 106-89-8 | 92.52 | Y | 1.5 | 0.75 | 1.0 | 2.1 |
| Ethylene Glycol | 107-21-1 | 62.1 | Y | 200 | 100 | 138 | 278 |
| 1-Methoxy-2-propanol (Propylene glycol monomethyl ether) | 107-98-2 | 90.12 | Y | 3500 | 1750 | 2413 | 4874 |
| Vinyl Acetate | 108-05-4 | 86.1 | Y | 100 | 50 | 68.9 | 139 |
| m-Xylene | 108-38-3 | 106.2 | Y | 350 | 175 | 241 | 487 |
| Toluene | 108-88-3 | 92.1 | Y | 150 | 75 | 103 | 209 |
| Chlorobenzene | 108-90-7 | 112.56 | Y | 500 | 250 | 345 | 696 |
| Phenol | 108-95-2 | 94.1 | Y | 100 | 50 | 68.9 | 139 |
| 2-Methoxyethanol | 109-86-4 | 76.1 | Y | 30 | 15 | 21 | 42 |
| Ethylene glycol monomethyl ether acetate | 110-49-6 | 118.13 | Y | 45 | 22.5 | 31 | 63 |
| n-Hexane | 110-54-3 | 86.2 | Y | 3500 | 1750 | 2413 | 4874 |
| 2-Ethoxyethanol | 110-80-5 | 90.1 | Y | 35 | 17.5 | 24 | 49 |
| 2-Ethoxyethyl acetate | 111-15-9 | 132.2 | Y | 150 | 75 | 103 | 209 |
| 1,4-Dioxane | 123-91-1 | 88.1 | Y | 1500 | 750 | 1034 | 2089 |
| Tetrachloroethylene | 127-18-4 | 165.8 | Y | 17.5 | 8.75 | 12.1 | 24.4 |
| Formaldehyde | 50-00-0 | 30.1 | Y | 16.5 | 8.25 | 11 | 23 |
| Isopropanol | 67-63-0 | 60.1 | Y | 3500 | 1750 | 2413 | 4874 |
| Chloroform | 67-66-3 | 119.4 | Y | 150 | 75 | 103 | 209 |
| N,N-Dimethyl Formamide | 68-12-2 | 73.09 | Y | 40 | 20 | 28 | 56 |
| Benzene | 71-43-2 | 78.1 | Y | 30 | 15 | 21 | 42 |
| 1,1,1-Trichloroethane | 71-55-6 | 133.4 | Y | 500 | 250 | 345 | 696 |
| Acetaldehyde | 75-07-0 | 44.1 | Y | 9 | 4.5 | 6 | 13 |
| Methylene Chloride | 75-09-2 | 84.9 | Y | 200 | 100 | 138 | 278 |
| Carbon Disulfide | 75-15-0 | 76.14 | Y | 400 | 200 | 276 | 557 |
| Trichloroethylene | 79-01-6 | 131.4 | Y | 300 | 150 | 207 | 418 |
| 1-Methyl-2-Pyrrolidinone | 872-50-4 | 99.13 | N | 160 | 80 | 110 | 223 |
| Naphthalene | 91-20-3 | 128.2 | Y | 4.5 | 2.25 | 3 | 6 |
| o-Xylene | 95-47-6 | 106.2 | Y | 350 | 175 | 241 | 487 |

Reference: State of CA Department of General Services IFB 55756 – Open Office Panel Systems

Annex D - Scorecard (Normative)

**Business and Institutional Furniture Sustainability Standard
Scorecard**

| Assessment Scope: | | | | | | | | |
|-------------------|---|----|--|-----------------|--------------|----------|----------|--|
| Yes | ? | No | Section | Possible points | Organization | Facility | Product | |
| | | | 5 Materials | 26 | | | | |
| | | | 5.1 Prereq. Design for Environment Program | | Required | Required | Required | |
| | | | 5.2 Climate Neutral Materials | | | | 1 | |
| | | | 5.3 Life Cycle Assessment | | | | | |
| | | | 5.3.1 Apply first two of the four elements in ISO 14040 during product design | | | | 1 | |
| | | | 5.3.2 Evidence that a company has completed an LCA utilizing all four components outlined in ISO 14040 | | | | 1 | |
| | | | 5.3.3 Evidence that a company has completed an independent third party peer review of its LCA | | | | 1 | |
| | | | 5.4 Efficient Use of Materials | | | | | |
| | | | 5.4.1 Material efficiency of 60% | | | | 1 | |
| | | | 5.4.2 Material efficiency of 70% | | | | 1 | |
| | | | 5.5 Rapidly Renewable Materials | | | | | |
| | | | 5.5.1 Select renewable materials for use as an integral component of the product | | | | 1 | |
| | | | 5.5.2 Ensure that renewable material production waste is composted or recycled | | | | 1 | |
| | | | 5.6 Biobased Renewable Materials - Sustainable Wood | | | | | |
| | | | 5.6.1 Basic 50% of the total wood weight of the product is compliant to a qualified organizations sustainable forest practices, OR | | | | 1 | |
| | | | A minimum of 20% of the total wood weight of the product is compliant to FSC sustainable forest practices | | | | | |
| | | | 5.6.2 Adv. 75% of the total wood weight of the product is compliant to a qualified organizations sustainable forest practices, OR | | | | 1 | |
| | | | A minimum of 30% of the total wood weight of the product is compliant to FSC sustainable forest practices | | | | | |
| | | | 5.7 Recycled Content | | | | | |
| | | | 5.7.1 Basic 30% (post-consumer + 1/2 post -industrial) or meet EPA Procurement Guidelines | | | | 1 | |
| | | | 5.7.2 Adv. 50% (post-consumer + 1/2 post-industrial) or exceed EPA Procurement Guidelines by 20% | | | | 1 | |

| Yes | ? | No | Section | Possible points | Organization | Facility | Product |
|-----|---|----|---|-----------------|--------------|----------|---------|
| | | | 5.7.3 Packaging | | | | 1 |
| | | | 5.8 Recyclable and Biodegradable Materials | | | | |
| | | | Measurement & Viability: Identify and quantify the amount of recyclable & biodegradable materials in the product. | | | | 1 |
| | | | 5.9 Extended Product Responsibility | | | | |
| | | | 5.9.1 Design for Durability/Upgradeability | | | | 1 |
| | | | 5.9.2 Design for Remanufacturing | | | | 1 |
| | | | 5.9.3 Design for Recycling | | | | 1 |
| | | | 5.9.4 Other facilitation efforts | | | | |
| | | | 5.9.4.1 Research on recovery options | | 1 | | |
| | | | 5.9.4.2 Buy-back, take-back, leasing as part of strategy | | 1 | | |
| | | | 5.9.4.2 Buy-back, take-back, leasing implementation | | 1 | | |
| | | | 5.10 Solid Waste Management | | | | |
| | | | 100% solid waste diversion goal | | 1 | | |
| | | | 100% solid waste diversion achievement | | 1 | | |
| | | | 5.11 Water Management | | | | |
| | | | 5.11.1 Water Inventory | | | 1 | |
| | | | 5.11.2 Water Efficiency | | | 1 | |
| | | | 5.11.3 Wastewater Discharge | | | 2 | |
| | | | 6 Energy and Atmosphere | 25 | | | |
| | | | 6.1 Prereq. Develop Energy Policy | | Required | | |
| | | | 6.2 Building Energy Performance Baseline | | | | |
| | | | 6.2.1 Conduct for single mfg. facility | | | 1 | |
| | | | 6.2.2 Conduct for up to two other facilities | | | 2 | |
| | | | 6.3 Building Energy Performance Rating | | | | |
| | | | 6.3.1 Energy Star equivalency of at least 60 for mfg or final assembly facility | | | 2 | |
| | | | 6.3.2 Energy Star equivalency of at least 60 for up to three other facilities | | | 2 | |
| | | | 6.4 LEED Certified Facility | | | | |
| | | | 6.4.1 LEED certified facility(s) 1 or 2 points available | | | 2 | |
| | | | 6.5 Embodied Energy | | | | |
| | | | 6.5.1 Cradle-to-Gate Analysis | | | | 1 |
| | | | 6.5.2 Gate-to-Gate Analysis | | | | 1 |
| | | | 6.5.3 Gate-to-Gate - 10% Reduction | | | | 1 |
| | | | 6.6 Finished Product Energy Consumption | | | | |
| | | | 6.6.1 Lighting products to meet California Title 24 | | | | 1 |

| Yes | ? | No | Section | Possible points | Organization | Facility | Product |
|-----|---|----|--|-----------------|--------------|----------|---------|
| | | | 6.7 Transportation | | | | |
| | | | 6.7.1 Inbound Transportation | | 1 | | |
| | | | 6.7.2 Outbound Transportation | | 1 | | |
| | | | 6.8 On-site and Off-site Renewable Energy | | | | |
| | | | 6.8.1 1% on-site energy OR 5% off-site renewable energy | | | 1 | |
| | | | 6.8.2 2% on-site energy OR 10% off-site renewable energy | | | 1 | |
| | | | 6.8.3 3% on-site energy OR 15% off-site renewable energy | | | 1 | |
| | | | 6.8.4 4% on-site energy OR 20% off-site renewable energy | | | 1 | |
| | | | 6.9 Greenhouse Gases | | | | |
| | | | 6.9.1 Greenhouse Gases Inventory Baseline | | | 1 | |
| | | | 6.9.2 Greenhouse Gas Reduction by 2%, or 4% (normalized) | | | 1 | |
| | | | 6.9.3 Greenhouse Gas Reduction by 4%, or 8% (normalized) | | | 1 | |
| | | | 6.9.4 Greenhouse Gas Reduction by 6%, or 12% (normalized) | | | 1 | |
| | | | 6.9.5 Greenhouse Gas Voluntary Reporting Program | | 2 | | |
| | | | 7 Human and Ecosystem Health | 29 | | | |
| | | | 7.1.1 Prereq Demonstration of Compliance - Compliance with applicable environmental requirements | | Required | | |
| | | | 7.1.2 Prereq Key Chemical, Risk, & EMS Policies - Establish environmental policy | | Required | | |
| | | | 7.2 ISO 14001 or equivalent | | | 2 | |
| | | | 7.3 Chemical Management Plan - Facility | | | 1 | |
| | | | Have a system in place to acquire, use, store, etc. chemicals OR | | | | |
| | | | Adopt a chemical hazard recognition plan OR | | | | |
| | | | Have a documented emergency response plan in place | | | | |
| | | | 7.4 Effects of Product, Mfg. Process and Maintenance Chemicals | | | | |
| | | | 7.4.1 Product Level [Material specification] (maximum) | | | | 4 |
| | | | 7.4.1.1 Basic MSDS reportable chemicals up to 95% of final product weight (1 point); OR | | | | |
| | | | 7.4.1.2 Inter. Chemicals of Concern list to 100 ppm for materials that add up to 99% of product weight (3 points); OR | | | | |
| | | | 7.4.1.3 Adv. All chemicals down to 100 ppm; 75% of prod weight (2 points), 90% of prod weight (3 points), 99.9% (4 points) | | | | |
| | | | 7.4.2 Mfg. Process Level (process chemicals) - Identify all process chemicals down to 1000 ppm used directly in the manufacture of the product | | | 1 | |

| Yes | ? | No | Section | Possible points | Organization | Facility | Product |
|-----|---|----|---|-----------------|--------------|----------|---------|
| | | | 7.4.3 Maintenance/Operation Level - Identify 50% (by \$) of all maintenance & operating chemicals not directly used in the manufacture of the product | | | 1 | |
| | | | 7.4.4 Chemical Reduction Strategy - Develop a strategy to reduce the use of materials and processes that have significant life cycle impacts | | | 1 | |
| | | | 7.5 Reduction/elimination of chemicals of concern | | | | |
| | | | 7.5.1 Elimination from products | | | | |
| | | | Persistent, Bioaccumulative and Toxic (PBT) | | | | 2 |
| | | | Reproductive Toxicant; | | | | 2 |
| | | | Carcinogen; | | | | 2 |
| | | | Endocrine Disruptors (ED) | | | | 2 |
| | | | 7.5.2 Reduction or Elimination from processes - Reduction or elimination of chemicals of concern (maximum) | | | 4 | |
| | | | 7.5.2.1 Demonstrate a 5 - 9% reduction (absolute) or a 10-19% reduction in chemical(s) of concern | | | | |
| | | | Demonstrate a 10 - 15% reduction (absolute) or a 20-29% reduction in chemical(s) of concern | | | | |
| | | | Demonstrate a 16 - 19% reduction (absolute) or a 30-39% reduction in chemical(s) of concern | | | | |
| | | | Demonstrate a reduction of 20% or more (absolute) or 40% or more in chemical(s) of concern | | | | |
| | | | 7.5.2.2 Document that processes do not contain any chemical of concern at a concentration greater than 1000 ppm | | | | |
| | | | Persistent, Bioaccumulative and Toxic (PBT) | | | | |
| | | | Reproductive Toxicant; | | | | |
| | | | Carcinogen; | | | | |
| | | | Endocrine Disruptors (ED) | | | | |
| | | | 7.5.3 Reduction from Maintenance/Operation | | | 1 | |
| | | | 7.5.4 Reduction of Hazardous Waste and Air Emissions | | | | |
| | | | 7.5.4.1 Hazardous Waste | | | | |
| | | | Finishing and Assembly | | | 1 | |
| | | | Fabrication | | | 1 | |
| | | | 7.5.4.2 Air Emissions | | | | |
| | | | Finishing and Assembly | | | 1 | |
| | | | Fabrication | | | 1 | |

| Yes | ? | No | Section | Possible points | Organization | Facility | Product |
|-----|---|----|--|-----------------|--------------|----------|---------|
| | | | 7.6 Low Emitting Furniture - Systems Furniture, Seating and Individual Furniture Components | | | | |
| | | | Furniture emissions shall meet the emission requirements of the BIFMA X 7.1 Standard at 168hr | | | | 1 |
| | | | Furniture emissions shall meet the individual VOC criteria listed in California Section 01350 at 336hr | | | | 1 |
| | | | 8 Social Responsibility | 10 | | | |
| | | | 8.1.1 Prereq Employee Health and Safety Management | | | Required | |
| | | | 8.1.2 Prereq Labor and Human Rights | | | Required | |
| | | | 8.2 Policy on Social Responsibility - Have a documented policy | | 1 | | |
| | | | 8.3 External Health and Safety Management Standard - Conform to a public health & safety mgt system | | | 1 | |
| | | | 8.4 Inclusiveness - Have documented policy | | | 1 | |
| | | | 8.5 Engage in community outreach and involvement - Ability to demonstrate volunteer efforts | | 1 | | |
| | | | 8.6 Social Responsibility Reporting - Publish a public report | | 1 | | |
| | | | Social Responsibility Reporting - Publish a public report based on a recognized guideline | | 2 | | |
| | | | 8.7 Supply Chain | | | | |
| | | | 8.7.1 Basic Extend Social Responsibility Expectations into Supply Chain - Establish supplier assessment tool | | 1 | | |
| | | | 8.7.2 Adv. Extend Social Responsibility Expectations into Supply Chain - Responses from 75% of direct material spend | | 2 | | |
| | | | Comments: √ indicates option chosen. Totals | 90 | 17 | 38 | 35 |